1964

The Screening Value of Rorschach Scales Designed to Assess Ego-Structure and Ego-Functioning

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THE SCREENING VALUE OF RORSCHACH SCALES DESIGNED TO ASSESS EGO-STRUCTURE AND EGO-FUNCTIONING

by

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A Thesis Submitted to the Faculty of the Graduate School of Loyola University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

February

1964

LIFE

LaMaurice H. Gardner was born in Morehead, Mississippi, on February 13, 1936. He was graduated from the University of Detroit with a Bachelor of Philosophy degree in June, 1958 and with a Master of Arts degree in June, 1960. He began his doctoral studies at Loyola University in September, 1960.

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ACKNOWLEDGEMENTS

The writer wishes to express his sincere appreciations to Frank J. Kobler, Ph.D, Professor and Director of Clinical Training at Loyola University, for his suggestions, direction, and assistance in the conduct of this research; to William McGurk, Robert Meyer, and Frs. Gorman and Baronowski who assisted in the collection of the data; to the administrators of the seminary for their cooperation; to Edward Doyle who participated in the reliability studies; and last, but not least, to his wife, Dolores, who so diligently typed the protocols used in this study and the rough draft of the completed manuscript.

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction.

The failure of past research to provide unequivocal evidence validating the Rorschach test as a clinical instrument, capable of yielding accurate personality descriptions and reliable prognostications, has been noted by several writers (Harris, 1960; Hertz, 1952; Zubin, 1954). Among those who have studied the problem in historical perspective there is the general belief that three principle difficulties are responsible for the contradictory results of validating research: (1) the extreme complexity of the relationships among Rorschach scores and patterns of scores, (2) the lack of an adequate theory by which to correlate Rorschach responses and personality functioning, and (3) the inadequacy of conventional statistical procedures when applied to the Rorschach test (Cronbach, 1949; Harris, 1960; Hertz, 1952; Rickers-Ovsiankina, 1960; Rosvold et al, 1954).

Attempts at remedying these problems began somewhere around the beginning of the last decade. Rapaport (1952) contributed greatly to efforts to provide a systematic rationale for relating Rorschach behavior to a theory of personality and a theory of thinking. His brilliant systematization of

psychoanalytic-Ego psychology (1951; 1960) has been the source of a number of promising articles and books which have integrated personality theory and the Rorschach test (Gardner et al, 1959; Holt, 1960 & 1962; Schafer, 1948 & 1954; Rapaport, Schafer & Gill, 1945). Cronbach (1949) has tackled the problem of determining the proper statistical procedures for use in working with the complex relationships among Rorschach scores and patterns of scores. His incisive review of Rorschach research has done much to correct some of the basic statistical errors that occur in otherwise well-designed Rorschach studies. One of his major findings may be a source of encouragement to Rorschach workers. In a review of a large number of studies, he found that frequently Rorschach hypotheses are rejected due to the use of faulty statistical techniques whereas if the correct statistical procedures had been used these hypotheses would have demonstrated significant validity.

A final effort to enhance the Rorschach technique for more effective use in research and in clinical practice is reflected in the use of scaling techniques with complex Rorschach data (Klopfer, Kirkner, Wisham & Baker, 1951; Klopfer, 1958; Lorr, 1954; Munroe, 1945; Zubin, 1954; Holt, 1960). A number of adjustment scales, prognostic scales, etc. have emerged. Many of these show definite promise for use in the analysis and prediction of behavior. Zubin (1954) reviewed the failures of the Rorschach technique and marshalled evidence to support the view that if we provide objective scales for analyzing the content of this "standardized interview" we shall be well on

the way towards clarifying many of the present day contradictions in Rorschach research and thereby obtain a better perspective on the evaluation of personality. A position similar to this has been stated by Lorr (1954) who espouses the use of rating scales and checklists in the evaluation of psychopathology. He had this to say:

> Clinical judgments derived from an analysis of the Rorschach test, the TAT, or a sentence completion may be recorded in objective form on rating scales. Ratings can be useful in defining and clarifying areas of agreement and disagreement. Clinicians differing in theoretical orientations find a common ground when a concept characteristic of an individual is stated simply, in graded form. When defined in simple understandable terms, many presently elusive and amorphous variables can be checked for reliability and related to a large domain of objectively expressed concepts. Conceptual formulations often loosely used, such as sexual identification and Ego strength, can be pinned down for closer scrutiny and validation.

What Lorr and Zubin appear to suggest, at least by implication, is that projective techniques might function more effectively if used actuarially in the screening of psychopathology and in arriving at reliable descriptions of personality traits. Interestingly, the appearance of these articles (Lorr, 1954; Zubin, 1954) coincides with the resusitation of the long standing controversy over clinical versus statistical or actuarial prediction (Meehl, 1954). Gough (1962) states the nature of this controversy succinctly: "In any given prediction situation which method is better - i.e., more accurate and more informative in a scientific way - that of the clinician or that of the actuary."

In actuarial or statistical prediction an individual

is assigned to a class of persons on the basis of a test score, interview data, etc. Predictions and personality descriptions are then made on the basis of the statistical frequency with which certain constellations of behavior occur within that class of persons (Gough, 1954). Such procedures are of definite practical value. They are conservative of time and of effort. Moreover, research has shown that when actuarial methods are employed, the entire process of testing and preparing a descriptive or predictive report can be executed by clinical clerks and technicians (Meehl, 1956; Marks & Seeman, 1963). Clinical prediction, on the other hand, involves a more complex and time consuming process. Here a highly trained clinician combines complex configurations of data derived from observations, test responses, etc. and develops a hypothetical model of the individual's personality structure from which attempts are made to understand, diagnose , and forecast his behavior.

Meehl (1954; 1956; 1957) has studied comparative researches on the topic of clinical versus statistical prediction. On the basis of his studies he has taken the position that in the interest of economy of time and effort and of reliable personality description, the clinician has no choice but to replace his own activity as an interpreter of psychological tests with the automatic, cookbook procedures of the actuary. The research reported by Halbower (cf. Meehl, 1956), Horowitz (1962), and by Marks & Seeman (1963) would seem to indicate that actuarial prediction is as accurate as, if not more accurate than, clinical

prediction. These findings are of great importance. They suggest that more effort should be directed toward adapting psychological tests to the method of actuarial prediction.

The Problem.

A common and unfortunate error is frequently made with respect to the controversy over clinical versus statistical prediction. Gough (1962) has called attention to the tendency to identify the use of interview data and projective techniques with the clinical method and to identify the use of personality inventories and questionnaires with the statistical method. Consequently it is sometimes erroneously concluded that inventories and questionnaires are superior to projective techniques in identifying personality patterns. If psychologists fall prey to this kind of thinking there is danger that the continued development of projective techniques will be sacrificed.

Obviously, actuarial descriptions of personality, based solely upon inventories and questionnaires, time saving though they may be, will not suffice. Such instruments, whether interpreted clinically or actuarially, have a number of serious limitations. Some of these limitations have been pointed out by Ellis (1952) in a review of the literature of self-appraisal techniques. He found that they do not measure accurately all the different traits they purport independently to measure; that the ease with which they can be faked is only partially compensated for by the various lie-detection scales built into the tests; that they have not as yet been clinically

validated in a clear-cut manner; and that their use for individual appraisal should be undertaken only with the most extreme caution. Cautions similar to these have been offered by Allport (1953), a psychologist known to have a vested interest in self-appraisal techniques. He observed that the self-reports of psychoneurotics cannot be taken at face value. Psychoneurotics are extremely defensive and their true motives are hidden. These motives are betrayed only by projective techniques.

Self-appraisal techniques generally fail effectively to control for "faking good" and therefore are of limited value in screening programs (Exner et al, 1963; Grayson & Olinger, 1957). As a final commentary on the limitations of self-appraisal techniques we might note an observation by Meehl (1956). He warned that statistical predictions cannot be made for the individual case unless the conditions match reasonably well the conditions under which the statistical formula was derived. Recent research has suggested that this may be true not only of the individual case, but of entire groups also (Arnold, 1960; Bier, 1956; McCarthy, 1942; Wauck, 1957; Weisgerber, 1962).

The limitations of self-appraisal techniques suggest that it probably is best to include projective techniques along with questionnaires and inventories in actuarial prediction (Allport, 1953; Gough, 1962; Holt, 1958; Hutt, 1956; Zubin, 1956). The work of Klopfer et al (1951) and of Klopfer et al (1958) indicates that not only can the Rorschach test be

adapted for use in the actuarial description and prediction of behavior, but also that it may be of special value. Gough (1962) has described Klopfer's Rorschach Prognostic Rating Scale as an actuarial index of the Rorschach protocol. It would seem useful, therefore, to continue efforts to adapt the Rorschach test to actuarial methods. But to do this it is necessary to validate further, Rorschach rating scales and checklists already in use and to develop new scales capable of measuring other important personality functions.

Purpose of the Study.

The purpose of the present study was to explore the value of three Rorschach scales designed to assess Ego-structure and Ego-functioning when these scales are used actuarially in a program of screening for psychopathology. The scales chosen for use in this study were the Rorschach Prognostic Rating Scale (RPRS) (Klopfer, 1951), the Genetic Level Score (GLS) (Becker, 1956), and a Rorschach Defense Checklist (RDC) developed by the writer. These scales integrate psychoanalytic Ego-psychology with techniques of scaling Rorschach data. They were chosen mainly because they bear a close relationship to contemporary clinical conceptions about the structure and functioning of the Ego in adjustment and psychopathology. A brief description of Ego-psychology may be found in Chapter II.

To study the effectiveness of these Rorschach scales we have chosen to tackle a special problem in screening for psychopathology. This problem is one in which a particular self-

appraisal technique (the MMPI) has been seriously questioned as a suitable technique for identifying psychopathology in candidates for religious life. It has been argued that test norms based upon the general population may not be applicable directly to this special group (Arnold, 1960, Bier, 1956; McCarthy, 1942; Wauck, 1957; Weisgerber, 1962). This research compares the MMPI and the Rorschach as actuarial methods. In addition it attempts to determine to what extent the MMPI is supported or contradicted by the Rorschach test, a projective test less subject to the influence the social and vocational variables that obviously influence results with self-appraisal techniques.

The importance of this study is threefold. First, it attempts to add to the literature on the validity of the Rorschach test generally. In addition it attempts to develop further, ways of using the test in such a manner as to conserve time and effort without, at the same time, sacrificing accuracy and reliability. Finally, it attempts to contribute the practical and urgent problem of screening for psychopathology in candidates for religious life.

CHAPTER II

REVIEW OF RELATED LITERATURE

Psychoanalytic Ego-Psychology and the Rorschach Test.

A number of leading Rorschach workers have found psychoanalytic Ego-psychology to be of special value in formulating interpretive hypotheses about the test (Beck, 1960; Bellak, 1954; Holt, 1954; Klopfer, 1954; Schafer, 1954; Rapaport, 1952). Psychoanalytic Ego-psychology departs from earlier psychoanalytic theory in that it focuses upon the Ego as an autonomous agent which functions to adapt the organism to both its inner and outer environments. In its most articulate form, psychoanalytic Ego-psychology was formulated by Hartmann (1958). Additional theoretical work along these lines has been done by Hartmann, Kris, & Loewenstein (1946), Kris (1951), Erikson (1950 & 1959) and by Rapaport (1951a; 1951b; 1952).

Psychoanalytic Ego-psychology teaches, contrary to the id-psychology that dominated earlier psychoanalytic theory, that the Ego does not originate simply out of conflict, but rather that the Ego is an inborn apparatus, an ensemble of functions which at any time may exert their affects outside the region of mental conflicts (Hartmann, 1958). Thus, the Ego was elevated from the subordinate role it played in id-psychology, to a position of central importance in the functioning of the or-

ganism. This change has caused a shift of focus in psychoanalysis from drives and drive vicissitudes to the analysis of Ego-structure and Ego-functioning in adjustment and psychopathology. The interrelated concepts of Ego-strength, Ego-differentiation, and Ego-defense have been given special attention by the Ego-psychologists.

Ego-strength has been described as the ability to tolerate tension, to delay impulse expression and to handle effectively excitations originating either in the organism or the environment (Fenichel, 1954). Ego-strength is based upon such aspects of personality as ability, character, will, etc. (Hartmann, 1958). A weak Ego predisposes the individual to psychopathologic reactions to conflict. For this reason it is important to establish effective ways of studying this important aspect of mental organization.

Ego-differentiation is a somewhat different concept. It refers to the extent to which the Ego has been able to separate itself from the more archaic processes of the organism, to consolidate its boundaries, and to distinguish between internal and external stimuli (Bychowski, 1952; Fenichel, 1954; Hartmann, 1958). Poor Ego-differentiation characterizes the more severe forms of emotional disturbance. This also is an important variable to study in attempting to understand normal and pathologic adjustment.

Finally, the concept of Ego-defense plays, perhaps, the most outstanding role in psychoanalytic Ego-psychology. "In

brief, defense is understood to refer to any psychological operation that is intended to block discharge of threatening, rejected impulses and thereby to avoid the painful emotional consequences of such discharge" (Schafer, 1954). In and of itself, the defensive process is not necessarily pathological; it is but a special type of control or adaptive mechanism (A. Freud, 1946; Hartmann, 1958). Knight (1952) has stressed the importance of knowledge of the Ego's defense mechanism for both diagnostic appraisal and psychotherapy of the individual patient. We might add that, as a type of control, the mechanisms of defense need always to be appraised where we are assessing the individual personality.

Psychoanalytic Ego-psychology, thus, has special relevance to the general psychology of adjustment and psychopathology. In clinical encounters with persons suffering from emotional disturbances, Ego-weakness, regressions to less differentiated levels of functioning, and the pathological use of the mechanisms of defense are commonly observed. Normal individuals, on the other hand, demonstrate a higher level of Ego-integration, a more adequate Ego-differentiation and specialization of functions, and smoothly operating defensive processes (Schafer, 1954).

Psychoanalytic theory, in one form or another, has provided the rationale for Rorschach interpretation since the test was developed (Rorschach, 1941). As psychoanalytic theory changed its focus to Ego-psychology, however, Rorschach inter-

pretation remained fixated on the earlier id-psychology. This state of affairs only began to be corrected with the work of Rapaport and his co-workers (1945, 1946, 1952) and was furthered by Schafer (1954). Arguing for the use of psychoanalytic Ego-psychology in the interpretation of psychological tests, Rapaport (1946) wrote:

> In the thought processes elicited in the course of these tests, it is the Ego-the carrier of conscious thinking-which indicates its proclivities and type of organization. A breakthrough of unconscious modes of thinking is rare in the tests. Thus, while general psychoanalytic modes of thought are useful in thinking about personality dynamics, in thinking about the processes underlying test reactions it is the psychoanalytic conception of the Ego and of thinking which should be invoked. However, psychoanalysis has only slightly explained patterns of conscious thought processes; and only its theory of the mechanisms of defense is relevant and helpful, if drawn upon cautiously.

In an exceptionally fine but somewhat speculative book by Schafer (1954), extensive efforts were made, point for point, to tie together Rorschach data and psychoanalytic Ego-psychology. Unfortunately, few attempts have been made to validate the many clinical hunches about the relationship between psychoanalytic Ego-psychology and Rorschach test responses. What is needed are well-validated techniques for the objective measurement of Ego-strength, Ego-differentiation, and Ego-defense. Some promising scales have been developed to measure Ego-strength (Klopfer's Prognostic Rating Scale) and Ego-differentiation (Becker's Genetic Level Score), but adequate techniques for the objective measurement of specific defense mechanisms remain to be developed. Since this study focuses upon three Rorschach measures

of Ego-structure and Ego-functioning and upon the value of these scales when they are used as actuarial techniques in the screening of psychopathology, most of the literature reviewed below deals mainly with them. However, since we have chosen to study a special problem in screening, the nature of this problem and prior efforts at resolving it will be reviewed in the last section of this chapter.

The Rorschach Prognostic Rating Scale.

The RPRS is a quantitative scale developed by Klopfer et al (1951) to predict an individual's response to psychotherapy. More basically, however, the scale purports to measure adjustment potential and Ego-strength. The scale provides not only a global rating of Ego-strength, but it also measures the important components of Ego-strength: reality testing, emotional integration, self-realization, and mastery of reality situations. An individual's score on the RPRS is dependent upon how he uses movement, shading, and color, as well as the accuracy with which he perceives forms in the Rorschach test. A detailed outline of the scale can be found either in Klopfer et al (1951) or Klopfer et al (1954).

Upon introducing the RPRS, Klopfer et al (1951) pointed out that psychotic patients and those with severe character disorders score lower than neurotic patients. The hope was expressed that the scale would be studied further for use in screening patients for psychotherapy. Four years later Butler and Fiske (1955) reviewed the literature on the RPRS and found

it to predict response to psychotherapy with a remarkable degree of accuracy. In addition, they observed that its predictive efficiency is considerably higher than any other Rorschach technique reported in the literature. Generally speaking, the BPRS "has shown outstanding validity as a prognostic instrument" (Adams, Cooper, Carrera, 1963).

Kirkner, Wisham, and Geidt (1953), in a study of forty V.A. patients, obtained a phi coefficient of .67 between pre-therapy BPRS scores and outcome measures. The patients studied consisted of thirty-eight neurotics and two psychotics. Using a multiple regression formula, they found only M,FM,m, and shading to be useful in predicting the criterion. The regression weights M,.16;FM,.12;m,.56; and shading,.37 yielded a multiple correlation coefficient of .70. It would appear from these data that predictions based upon the movement and shading aspects of the scale are as predictive as, if not better than, predictions based upon all the components of the scale. This study lends general support to the validity of the Prognostic Rating Scale. However, the fact that only forty subjects were employed makes the results rather tentative. This would apply particularly to the variables found to be most predictive in this sample and the regression formula suggested. The limitations of regression formulae have been stressed by Cronbach (1949). These weights seem rarely to hold up in cross-validation. They seem to rely too heavily upon chance variations in the original sample. That this is true of the weights derived in this study

can be demonstrated by the fact that Mindess (1953) found form level rating to be the best predictor in his sample, with M running a close second. Sheehan et al (1954) found movement and color to be the best predictors in their sample and Cartwright (1958) found M,C, and form level rating to be most predictive in her sample. Regression weights are of such a nature as to require a fairly large sample to achieve stability.

Mindess (1953) reports a study of eighty patients of various diagnoses, including sexual perversion, character disorders, and neuroses. Each patient received six months of psychotherapy and afterwards was rated as to progress by his or her therapist. The rating scales were fairly objective and simplified the task of the therapist. Computing the correlation between the BPRS and final adjustment after therapy, Mindess found a Pearson r of .81. When the schizophrenics were excluded from the sample, however, the correlation was .66. This matches the findings reported by Kirkner et al (1953). It is of interest to note, however, that the BPRS, in this study yielded predictions only slightly better than those of psychiatrists (r=.59). This study is open to criticism because the author failed to control for therapists' awareness of the referral source. Forty of the patients came for treatment willingly and forty were sent by the courts because of sexual perversion and acting-out. The obvious variables of motivation for treatment and the resistance of sexual perversion to treatment may well have caused the success of the psychiatrists to be far greater than it would

have been in a more homogeneous sample.

Johnson (1953) found that change on the RPRS was predictive of the response of eighteen emotionally disturbed children to play therapy. Her unimproved group uniformly produce RPRS scores which fell in Group IV, signifying a 50-50 chance for improvement. She suggested that a cutting score at the lower limit of Group III, signifying that there is better than a 50-50 chance that any treatment will be of some help, affords a good base for predicting outcome of treatment. This is one of the few studies to demonstrate changes in the RPRS following treatment. More than likely this was because her subjects were children whose Rorschach protocols tend naturally to change unless there is some physical or emotional block to this natural process. The fact that the average IQ of these children was 71 (Stanford-Binet) provides a possible lead.

Sheehan et al (1954), in a validity study of the RPRS, attempted to subject it to the more rigorous task of predicting outcome of therapy in a single diagnostic group. They studied the Rorschach records of thirty-five stutterers receiving group psychotherapy in a university clinic. Using therapists' ratings of degree of improvement, they compared those patients who improved most with those who improved least, and the thirty patients who remained in therapy with the five who dropped out before completion. Among the significant findings, the authors report that (1) the RPRS differentiated the improved subjects from the unimproved subjects significantly at $P<.01$ for t test

and $P<.02$ for X^2 test; (2) all the movement scales reflect differences between the groups ($P<.02$); (3) shading and form level ratings did not differentiate the groups ($P<.30$); (4) R is not related significantly to the RPRS; and (5) the scale successfully predicts psychological change, as rated by therapists, but not symptomatic improvement. The latter finding indicates simply that the subjects rated as improved demonstrated increased emotional maturity but that generally there was little improvement in their stuttering problem. This finding is important. It suggests that the outcome of psychotherapy may not be symptom reduction, but rather learning to tolerate one's symptoms. Like the foregoing studies, this study needs to be replicated, and with a much larger sample. Generalization from such a small sample would be a poor practice indeed.

The only study to report negative results with the RPRS in predicting treatment outcome was published by Filmer-Bennett (1955). This study employed the Rorschach records of twenty-two, variously diagnosed patients. Seven of the eleven pairs were schizophrenics, two pairs were manic-depressives, and two pairs were psychoneurotics. The eleven pairs were matched according to age, sex, intelligence, marital status, type of therapy received, and chronicity. In each pair, one patient had improved but the other had not. The Rorschach protocols of these eleven pairs of patients were given to twelve ABEPP psychologists who were asked to predict, without prior knowledge, which of the patients improved and which did not improve.

The results show that most of the psychologists did little better than chance but there is a better than chance consistency among psychologists with respect to accuracy. The RPRS produced about the same results as did the psychologists, suggesting that both rely upon similar Rorschach variables in making predictions. Filmer-Bennett concluded from this that the Rorschach is inadequate as a sole measure of treatment response. Here, again, one might object to the size of the sample employed. But more important, the data derived from the RPRS shows a number of situations in which the improved and unimproved subjects in a single pair achieved the same group rating on the RPRS. Since the RPRS purports only to measure adjustment "potential" and not actual adjustment, the results of this research cannot be said to be an indictment against the RPRS. The RPRS only misses clearly in three of the eleven pairs. One must take care not to forget, as Filmer-Bennett has obviously done, that the RPRS is a measure of adjustment potential, of available Ego-strength. It does not purport to predict whether or not an individual will harness his available resources in the interest of therapeutic advancement. Studies have shown, however, that one can predict that in a large number of cases, certainly more than twenty-two, the relationship between adjustment potential and actual improvement in therapy will obtain.

R. Cartwright (1958) studied the ability of the RPRS to predict response to client-centered therapy. Unfortunately, the study is extremely limited in terms of how her data are to be in-

terpreted. Her sample consisted of the records of thirteen persons who had been receiving client-centered therapy at the University of Chicago counseling center. Of these there were eight judged as improved and five as unimproved. Comparing the RPRS scores of these groups, she found a tau coefficient of +.54 ($P<.03$) between the RPRS and ratings along a dichotomized scale indicating degree of success or failure. In addition, she found that human movement, color, and form level rating were the best predictors, and that when combined into a "strength score" they yield a tau correlation of +.73 ($P<.003$). It is rather doubtful that her "strength score," based upon the grand number of thirteen, will ever be validated.

Adams, Cooper, and Carrera (1963) studied the relationship between the RPRS and the MMPI. They found the scale to correlate negatively with all ten clinical scales on the MMPI and positively with Barron's Ego-Strength Scale. Each one of these correlations fell in the expected direction ($P<.001$). This study is of significance in that it demonstrates, concurrently, the validity, not only of the RPRS but also of the interpretative hypotheses Klopfer has formulated regarding the determinants making up the scale. Although the statistical work involved in this study is acceptable there are errors to be noted. One example is to be found in Table 2 of the study. Here the authors base the number of correlations expected by chance to exceed the various levels of significance (.10,.05, and .01) upon a total number of 136 correlations which are supposed to be in the table.

A count reveals that there are but 119.

An unpublished study by Stampfl (1959) has demonstrated that the RPRS can be employed to differentiate the children of psychotic parents from the children of nonpsychotic parents. Using the RPRS as a measure of Ego-strength, Stampfl compared the Rorschach protocols of 29 children whose parents were psychotic with the protocols of 60 children whose parents were nonpsychotic. He found the differences between the groups to be significant beyond chance ($P<.05$). Of the various determinants making up the RPRS only FM ($P<.05$) differentiated the groups. It might be noted that despite the fact that he makes profound statements about the dangers of inflating probabilities by employing too many hypotheses. There are twenty-nine significance tests in his study. Six of these are significant beyond the .05 level of confidence. One, of course, would be expected to arise on the basis of chance alone. Consistency would dictate that he set higher standards for rejecting the null hypothesis.

These studies almost unanimously support the RPRS as a valid instrument for measuring outcome in treatment. Only two, however, have dealt directly with the validity of the construct Ego-strength which is said to underlie the scale's predictive efficiency (Adams et al, 1963; Stampfl, 1959). Additional research is needed. Larger groups should be employed despite the fact that scoring the RPRS can be tedious. All of the studies above have demonstrated that the scoring system has a high degree of reliability. Obviously, the scale could be of signifi-

cant value as a screening instrument. The concepts of Ego-strength and adjustment potential are very meaningful when attempts are made to detect persons who, because of emotional disturbances, are unsuited to the demands of vocational and professional training as well as a number of other life tasks.

The Genetic Level Score.

The Genetic Level Score (GLS) is a fairly recent technique for analyzing Rorschach data. The GLS was developed by Becker (1956) and is based upon the empirical researches of Friedman (1953), Siegel (1953), and Hemmendinger (1953) who studied developmental sequences in perception and thought as these are reflected in the Rorschach records of children, normal adults and schizophrenics demonstrating varying degrees of regression. In a general way, the GLS can be said to measure regressive and immature thinking (Becker, 1956) and psychological differentiation (Witkin et al, 1962). In psychoanalytic Ego-psychology levels of differentiation in thinking and perception are conceptualized under the rubric Ego-differentiation. The GLS yields an indication of the Ego's ability to differentiate, organize, and integrate perceptual experiences and discloses something of the extent to which the individual's thought organization and personality have reached maturity or have fixated and regressed. The basic idea is one borrowed from the genetic psychology of Werner (1948) which construes mental organization in terms of developmental movement from the syncretic to the discrete, from the diffuse to the articulated, from the indefinite

to the definite, and from the labile to the stable, always in the direction of increasing differentiation and hierarchic integration. Friedman (1953) adapted these notions to the Rorschach test and showed that the formal organization of perceptual responses to the test follow the predicted developmental sequence. One's score on this scale (GIS) places him at either of three stages of psychological maturation: the genetically early stage (levels 1 & 2) which characterizes the perception of children under five years of age and regressed schizophrenics; the genetically late stage (levels 3 & 4) which characterizes the perception of children from ages seven through adolescence and the less regressed emotional disorders; and the genetically mature stage (levels 5 & 6) which characterizes the emotionally integrated and normal adult.

Although the concept of a genetic sequence in perception and thought underlying the GIS is attributed to Werner (1948), the same was discussed in Freud's Totem and Taboo (1921) and later by Fenichel (1954). Fenichel wrote as follows:

> the differences in the perceiving of small children and adults must result in their experiencing the world differently. Observations on mentally ill persons who have regressed to primitive types of perception confirms that the archaic world appears vaguer and less differentiated, that its objects flow into one another and into the ego, or into ego constituents, and that the first representations are large in size, inclusive, and inexact. They consist not of elements which are only later put together, but of wholes which are only later recognized as multiple.

Pioneering efforts at establishing a method for studying Ego-differentiation and perceptual articulation with the Rorschach

test such as W,D,Dd, confabulations, contamination, etc. After developing the scoring system, he applied it to the study of perceptual regression in schizophrenia. Comparing the scores of 30 schizophrenic patients, 30 normal adults, and 30 normal children, he found that the perceptual scores of schizophrenics and children were not significantly different. Schizophrenics differed significantly, however, from normal adults on these same scores. The hypothesis of perceptual regression in schizophrenia was supported although the schizophrenic subjects, unlike the children, demonstrated a mixture of genetically early and genetically late scores. Using three independent judges, the agreement in scoring reached 93 per cent. This study was well-designed and the results would seem, off hand, to be clearly in favor of the hypothesis. One factor, however, leaves room for doubt. Differences in the number of Rorschach responses covaried with differences in location choice. Thus productivity is confounded with genetic level. Parsimony would require, if applied strictly, that the author state first of all that productivity distinguishes the schizophrenic patient from the normal adult and makes the schizophrenic to resemble the child. Cronbach (1949) has shown that there is a near linear relationship between number of responses to the Rorschach test and location choice.

In a similar study, Siegel (1953) studied perceptual structuralization in paranoid schizophrenia. Comparing 30 paranoid schizophrenics with 30 hebephrenic and catatonic schizo-

phrenics and 137 children of various ages, Siegel found that the genetic scores of paranoid schizophrenics correspond to the more differentiated but little integrated perception of children between six and ten years of age. The hebephrenic and catatonic schizophrenics, on the other hand demonstrated perceptual activity resembling that of children between ages three and five, i.e., global, amorphous perceptual scores. Siegel sets his confidence level at .02, apparently to control for an inflation of probabilities since there are 300 explicit significance tests. The number of comparisons reaching statistical significance are evenly distributed over significant and nonsignificant differences in the number of responses. This suggests that the total number of responses plays no determing role in the differences found in this study. A similar degree of reliability for the scoring system (93.9%) is reported in this study.

Hemmendinger (1953) reports a study of perceptual organization and development as these are reflected in Rorschach developmental scores. This study employed normal children ages three to eleven years exclusively. He reports significant changes in choice of location with increase in age. Plotting the data in his Table 2 discloses a curvilinear relationship between number of responses (R) and location choices. This would seem to indicate that any differences obtained can be explained in terms of changes in R. For example, in his Table 3 there are 184 significance tests computed. Of these 76 are significant at .10

or better. But 55 of these significant differences occur where there are significant differences in R. He reports that W% increases significantly from age three to age seven. But so does R. Is there then any scientific basis for his conclusion that younger children see the world in a global fashion while the older children are nonwhole or detail perceivers? A careful analysis of his data discloses that age, R, and Dd% covary. Using the sequence age, R, Dd%, note the close relationship, the covariance of these factors: three year olds produce a median number of 13.0 responses and a median Dd% of 0.0; six year olds 17R, Dd% 16.0; ten year olds 27.5R, Dd% 11.0; adults 19.0R and Dd% 4.0. What we learn from this study may not be so much that perception changes with age, but that as one grows older he gives more responses and that certain of his location choices depend highly on this. There are 502 explicit significance tests in this study, an unwieldy inflation of probabilities. Approximately 50 of his significant differences could be expected to occur on the basis of chance alone.

In the same year and the same journal, Pena (1953) reported a study of perceptual structuralization in persons with brain damage. Basing his hypotheses on the theories of J. H. Jackson and Goldstein, Pena predicted that cerebral damage in adults would be accompanied by a relative increase in genetically early perceptual features. Utilizing a slight modification of Friedman's (1953) scoring system he found a significant difference ($P<.05$) between the perceptual scores of normals and

organics and between organics and schizophrenics ($P<.10$), but not between normals and schizophrenics. This latter finding is difficult to explain in the light of the data reported by Friedman (1953) and Siegel (1953) who found significant differences to exist between the perceptual scores of normals and schizophrenics.

Phillips and Frame (1954) applied genetic theory to the study of normal and pathological perception and found that (1) perceptual development can be accurately measured; (2) genetically early perception has a predominance of diffuse features; (3) in the individual patient, the severity of a disorder might be evaluated in terms of degree of perceptual regression; and (4) that genetic scores might be used to assess therapeutic success. Their concluding remarks are of special relevance to the present study. They had this to say:

> If ... some technique could be developed to evaluate the individual's preferred mode of defense, and this in turn were to be related to his perceptual maturity level, it might be possible to construct a genetic scale along which the various systems of defense might be ordered.

Lane (1955) applied Friedman's (1953) genetic level scoring system with slight modifications to the study of social effectiveness. Assuming that "paralleling development is an emergence of a sense of personal responsibility and a capability for choosing among motives, Lane found his composite developmental scores to discriminate high versus low social effectiveness at a significant level ($P<.01$). This study seems to lend unusual support to the validity of the genetic level scoring

system since the subjects were all normal male industrial workers with homogeneous socio-economic backgrounds. The study is commendable also for the subtle controls employed.

A classic study by Becker (1956) demonstrates the value of scaling Rorschach data related to genetic levels of perceptual differentiation. Becker took Friedman's (1953) scoring system and developed the Genetic Level Score, a Rorschach scale consisting of six progressive levels of perceptual differentiation. Applying this scale to the study of the process-reactive distinction in schizophrenia, he found the Rorschach mean-genetic-level score and the Elgin Prognostic Scale to correlate - .599 ($P<.01$) for men, and - .679 ($P<.001$) for women. The GLS is an abrievation of Friedman's scoring system. He concluded that there is evidence for a measureable dimension of regressive and immature thinking which is related to the process-reactive dimension in schizophrenia. The study was executed with precision and the design was masterful.

An interesting study of Rorschach genetic level and mental disorder was reported by D. Levin (1959). This study attempted to use the GLS in forecasting the course of serious mental disorders. It was hypothesized that a significant relationship exists between a patient's Rorschach GLS at the time of his admission to a mental hospital and his hospital status one year later. The results of the study supports the hypothesis at the .01 level of confidence. This study is brief and to the point. The findings replicate those of Becker and add significantly to the literature on the validity of the GLS as a prog-

nostic instrument.

Wilensky (1959) studied the relationship between the GLS and social participation in chronic schizophrenic patients. His basic assumption was that the sequence of genetic growth leads to sociability. Stated in another manner, in the sequence of development, egocentricity gives way to sociocentric, cooperative behavior and responsibility for self. Wilensky found the GLS to correlate significantly ($r=.71$; $P<.01$) with social participation and with level of hospital adjustment ($r_b=.82$).

A possible objection can be lodged against this study. Raters of social participation and hospital adjustment had knowledge of whether the patients were on distrubed or non-disturbed wards; so also did the Rorschach scorers. The author plays this fact down and argues that there was "probably" little contamination of the data on this account. It is of further interest that within the closed ward group the GLS and social participation correlate at $r=.55$ ($P<.05$); on the open ward $r=.05$ which was not significant. Obviously the amount of disturbance and symptomatology demonstrated on the open ward is less variable than that demonstrated on the closed ward. It is significant that of the fourteen patients on the closed ward five had a GLS above the median for their group. Within six months, these five had been moved to an open ward, thus demonstrating, further, the prognostic validity of the scale. This study is critical, for it not only demonstrates the merits of the GLS but it also notes its limitations. Among the limitations

discussed are: (1) it does not appear to discriminate adequately among the fairly select group of relatively healthier patients; (2) the current scoring system has a ceiling effect which seems to reduce the variability of the obtained distribution of scores in relatively homogeneous groups; and (3) GLS and R are related in a complex manner, i.e., as R increases, so also does the number of mediocre responses with a consequent leveling of the average GLS.

Levine (1960) studied Rorschach genetic level and psychotic symptomatology. Comparing the GLSs of 120 psychotic W.A. patients demonstrating varying types of symptoms, Levine found no significant relationship to exist between type of symptom and Rorschach genetic level score. This study is at variance with other reported studies in more ways than one. Not only does his results differ surprisingly from those of Friedman (1953), Siegel (1953), Wilensky (1955) and Lane (1955), but so also does his theoretical orientation. Instead of Werner's genetic theory, Levine attempts to interpret his data in terms of Adler's theories of development and compensation. Unusual indeed.

Goldfried (1962) presents normative data on the Rorschach developmental level "card pull" in a psychiatric population. His findings are not at all surprising. His most important finding was that Rorschach card IX tends to elicit perceptions having the lowest level perceptual characteristics. In addition, and perhaps more importantly, he found that whether perceptual scores are averaged card by card or over the entire record, the differences will not be significant . This helps to clarify an

objection made by Wilensky (1959) to the effect that different Rorschach cards tend to elicit a build up of genetically low level responses (Card IX) and genetically mediocre responses (Card X) which may adversely affect the total score unless the cards are averaged separately and then added to yield a composite score.

In another investigation, Goldfried (1962) studied the GLS and the MMPI as measures of severity of psychological disturbance. Applying the Meehl-Dahlstrom rules for MMPI measures of psychological disturbance in 50 male psychiatric patients, he found no significant differences to exist between neurotic and psychotic subjects on Rorschach genetic level scores. He suggests the possibility that the GLS and the MMPI may be measuring somewhat different aspects of functioning.

It is possible that the Rorschach measures the quality of a subject's organizational ability, his level of cognitive functioning, while the MMPI may reflect observable behavior and symptomatology. This appears to be consistent with the results reported by Levine (1960). Symptoms, as reported in the MMPI may not be intimately related to psychological differentiation, although there may be a tendency for persons reflecting lower GLSs to demonstrate certain symptoms with more chronicity than patients having higher GLSs (Lane, 1955; Becker, 1956; Levine, 1959; and Wilensky, 1959).

A number of unpublished studies have been reported by the authors mentioned above. These are of importance and require recognition. Phillips and Framo (1954) report a study by Frank

in which it was demonstrated that psychoneurotics are intermediate to and overlap with the performance of 10 year old children on the one side and normal adults on the other, and a study by Framo in which the Rorschach was administered tachistoscopically to normal adults. Framo found that perceptual adaptation to a new task is achieved developmentally. In another unpublished study reported by Phillips and Framo, Freed found that hebephrenic and catatonic schizophrenics when administered the Rorschach tachistoscopically, did not use the increased exposure time to improve their performance as normals did.

The studies reviewed above have demonstrated that the Rorschach GLS can be used effectively to determine developmental sequence in perceptual articulation, degree of regression in schizophrenia and cerebral pathology, ability to differentiate, organize and integrate perceptual experience, severity of a mental disorder, social effectiveness, outcome of therapy, and social participation. The scale appears to fail, however, in distinguishing choice of symptom and in separating, effectively, neurotic from psychotic patients. A number of technical elements remain to be clarified also. First of all is the question of the relationship between R and the GLS. In addition, more research could be conducted on the matter of "card pull" and GLS.

Measuring Defensive Processes with the Rorschach Test.

The sign approach to the identification of various personality traits, as these are reflected in the Rorschach test, has received ample criticism. This, however, has not discouraged

clinicians in its use. Some clinicians urgue, despite the failure of research to validate various Rorschach signs, that their validity can be observed empirically in routine psychodiagnostic work. Why should this discrepancy exist? Is it that the clinician is using more data than he is aware of, or is it that the research designs and statistical procedures at our disposal are not sensitive enough to handle the nuances of clinical data? There are adequate reasons for assuming a degree of truth to exist on both sides of the controversy (Cronbach, 1949). As yet there has been no mutually acceptable solution to this problem.

One explanation of why research often fails to support the sign approach is that in research investigations those signs are sought in the protocols of various diagnostic groups, each of which, upon closer analysis may demonstrate considerable internal heterogeneity, particularly with respect to symptom clusters, Ego-strength, and mode of defense (Guertin et al, 1962).

Diagnosis has always been an unreliable procedure. Anyone who has participated in a diagnostic staffing is aware of the amount of disagreement that may arise, even in cases where the symptoms are fairly obvious. Researchers often seem to have lost awareness of the unreliability of diagnostic labels. In studies designed to assess the validity of Rorschach signs, this unreliable criterion, i.e., diagnosis, is the independent variable. Research organized around broad diagnostic categories will, therefore, usually demonstrate more disagreement than agree-

ment (Reitan, 1962).

Psychologists have not been alone in their disappointment with diagnostic labels. Psychiatrists have gone so far as to develop a better nosology (APA, 1952). Nowhere, however, has the real crux of the diagnostic problem been more clearly recognized than in psychoanalysis (Fenichel, 1945). Fenichel (1945) argued that diagnoses based upon the organization of patients' psychological defenses are likely to be both more reliable and more valid than diagnoses based upon an inventory of patients' symptoms. The point was made more explicit by Rapaport (1950) who noted that our understanding of adjustment and psychopathology is tied, unfortunately, to a psychology of drives, drive conflicts, and drive vicissitudes. Too often diagnosis consists in no more than tagging a label on the drive conflict believed to be sponsoring a patient's symptoms. Diagnostic formulations need to involve appraisals of the patient's strengths, assets, and controls. If such were possible not only would diagnoses be more reliable, but our prognostications might also reflect significant improvement (Rapaport, 1950).

The swing in the direction of emphasizing the strengths, assets, and controls of patients is part of a larger movement in dynamic psychology. Ego-psychology, as it is called, places emphasis upon the autonomous, conflict-free mental structures, i.e., controls and defenses, the individual has at his disposal and which can be usefully employed in the process of adaptation (Hartmann, 1958; Kris, 1951; Rapaport, 1950).

Interestingly, those who have had most to do with the

fashioning of psychoanalytic Ego-psychology have given special attention to the mechanisms of defense and their role in the control and regulation of both normal and abnormal thought processes (Hartmann, 1958). This, of the many hypothetical constructs of psychoanalysis, has received wider acceptance and application in dynamic psychology than any other. The construct, psychological mechanism of defense, is being elaborated and refined. Some efforts are being made to make it more accessible to research utilizing Rorschach's test (Schafer, 1954; Gardner et al, 1959).

So far no one has taken Fenichel's advice and constructed a nosology around the mechanisms of defense. Only rarely can a detailed appraisal of a patient's defenses be found in the ordinary diagnostic reports of psychiatrists. In the past few years, however, psychologists have been including in their diagnostic reports an assessment of the patient's defenses, mostly on the basis of Rorschach test results. This has contributed significantly to such problems as diagnosing the "borderline" case, prognosis, and treatment planning (Knight, 1952). The methods psychologists used to identify defenses were not explicitly formulated, however, and were largely the art of each psychologist so endowed.

Beck (1954) and Schafer (1954), in the same year, published separate sign approaches to the identification and evaluation of defense mechanisms as they reveal themselves in Rorschach responses. Both methods have advantages and disadvantages.

In a monograph on the schizophrenias, Beck (1954) de-

scribed his initial efforts at developing a series of Rorschach signs that would reflect defensive organization in schizophrenia. These signs were correlated with operational statements regarding schizophrenic behavior and subjected to factor analysis within the framework of Stephenson's Q technique. With Molish (1958), Beck developed these Rorschach signs further to include 50 additional descriptions of behavior that would apply to "normals" as well as other clinical groups. The fact that the signs employed by Beck and Molish are operationally defined and factor analytically derived is much in their favor. A real disadvantage in the use of these signs, however, would seem to lie in the fact that the behavior items underlying the signs are based disproportionately upon schizophrenic subjects. In addition, being factor analytically derived, the defenses their signs are said to represent fall into three very broad groups: constrictive defenses, pathogenic and restitutional defenses, and adjustive defenses. These broad groupings are a little too crude for diagnostic purposes and would not seem adequately to differentiate various types of psychopathology as they are known clinically.

Schafer's approach (1954) claims the ability to identify specific neurotic and psychotic defenses, e.g., repression, denial, reaction-formation, projection, etc. It has the advantage of being based upon both the formal aspects of the Rorschach protocol, as would be found in the scores, and upon qualitative aspects of the record, e.g., content and verbal style. The greatest disadvantage in Schafer's approach is that

it is largely impressionistic, molar, and lacking in firm empirical support. Yet, the writer sees Schafer's approach as the method of choice. It is based upon psychoanalytic Ego-psychology, it uses classical rubrics for defining the defenses unearthed, and, if it is indeed a valid method of identifying mechanisms of defense, it can be applied directly to contemporary nosology. It seems to hold promise. It could become a major diagnostic technique and an important research tool.

Two studies in the recent literature represent the way in which Schafer's defense signs have been utilized in research. Gardner, Holzman, Klein, Linton and Spence (1959) used the signs for two specific types of defense (repression and isolation) as independent variables in a study of cognitive style. Using a crude scale to arrive at a composite score on each of these defenses, they found that subjects who rely more on isolation as a mode of defense tend to be sharpeners on variety of perceptual tasks. Subjects relying more on repression as a preferred mode of defense, on the other hand, demonstrate a greater tendency to be levelers in response to perceptual tasks. This study has nothing to say of the validity of the constructs underlying the signs employed. It does, however, demonstrate that different psychological states may be assumed to underlie the different signs. What these psychological states are no one can say.

Baxter et al (1962) used a selected number of Schafer's Rorschach signs of defense to compare the amount of defensiveness found in the Rorschach records of the parents of

schizophrenics with the amount of defensiveness found in the Rorschach records of the parents of normal subjects. They found the protocols of the parents of schizophrenics to demonstrate significantly greater amounts of defensiveness than those of the parents of normal subjects. One might note that the parents of schizophrenics have more to be defensive about in this day of the "schizophrenogenic" mother and father. This study suffers from the same frailty as the one reported immediately above. No effort was made to validate the signs of defense. This study does not even attempt to differentiate between the potentially different modes of defense employed by the subjects.

The limitations of prior research on the use of Rorschach signs in measuring mechanisms of defense have been pointed out above. A detailed study of any one or several groups of defense signs would seem to be needed badly. The constructs repression, reaction-formation, isolation, projection, etc. need to be validated separately and more refined scales need to be developed to measure them. Only after this is done will we be on the way to a more precise and scientific technique of identifying and evaluating signs of defense in the Rorschach test.

Screening for Psychopathology in Religious Life.

Research concerned with the incidence of serious emotional disorders among priests and religious has been consistent, over the years, in demonstrating that schizophrenic conditions and obsessive-compulsive neuroses occur with disproportionately greater frequency among those in religious life than among mem-

bers of the general population. Moore (1936) was first to report these findings and he stimulated much of the research which followed. McCarthy (1942) compared seminarians with nonseminarians and found the seminarians to be characterized by stronger schizoid and neurotic factors. Benko and Nuttin (1956) studied adjusted and maladjusted seminarians. They found the maladjusted seminarians to possess tendencies toward schizophrenia and the obsessive-compulsive neuroses. Kelley (1961) found schizophrenia to be the most prevalent form of mental illness among hospitalized women religious.

Along with the descriptive or statistical studies of "insanity in religious life," a number of attempts were made to establish more sophisticated methods of detecting potential and actual psychopathology in applicants for religious life. The MMPI has been the favored instrument in the screening programs which have been set up to solve this problem. This is largely because the instrument is time saving, economical, and has demonstrated reliability and validity in its use with normal and psychiatric populations (Dahlstrom & Welsh, 1960). Where this instrument has been u sed to screen applicants for religious life the results have been difficult to interpret.

McCarthy (1942) found MMPI results to correlate poorly with faculty ratings in his seminary population. He expressed reluctance at accepting MMPI results at face value because of this fact. Bier (1956) also expressed concern over acceppting MMPI results at face value for religious. He attempted to

tailor the test to the seminary population by dropping a number of items and re-working others. Recent studies using Bier's revision of the test do not reflect any greater clarity with respect to how the results of the test are to be interpreted (Weisgerber, 1962).

Wauck (1957) compared the results of psychological tests with faculty ratings for his seminary group and found the correlations to be so low that he suggested that strict limitations be placed on how such tests are to be used in screening seminarians. Wauck's subjects were drawn from the major seminary and constitute a different type of population compared with the minor seminarians studied in the investigation reported in the following chapters. This fact must be kept in mind when these two related studies are compared. Rice (1962) has done considerable work on the problem of screening seminarians with the MMPI and has developed special MMPI scales for this purpose. He has not, however, resolved the problem of how to interpret the standard clinical scales on this test when it is used with seminarians.

McDonagh (1961) and Gorman (1961), on the other hand, employed the MMPI as a part of a battery of tests in their study of seminarians. On the basis of profile inspections and statistical procedures, they were able to develop a set of norms for use in future screening. These norms are based upon a "normal" and a "suspect" group. The "suspect" group consisted of those seminarians with two or more MMPI scales above a

score of 70. This group is still undergoing intensive study. Kobler (1962) conducted a similar study with women applicants for religious life. On the basis of a prediction formula developed from the results of his test battery, he was able to detect emotionally unstable and prepsychotic applicants with a significant amount of success.

Weisgerber (1962) found the MMPI to be lacking in discriminative power with his seminarians. His five year follow-up study disclosed that of those seminarians who later exhibited overt psychopathology, only six were clearly detected by the MMPI, while nine were clearly missed by the instrument. In this case the MMPI proved to be only a slight improvement over actuarial expectancies. A study by Hispanicus (1962) demonstrates the extent to which faculty ratings of various personality traits concur with MMPI results. He found that there is concurrence on traits such as suspiciousness (Pa), conventionality (Pd), and compulsivity (Pt), but variance between test scores and faculty ratings on schizoid (Sc) and hypomanic (Ma) traits.

This cursory review of the literature on the screening psychopathology in religious life disclosed unresolved ambivalence with regard to the usefulness of the MMPI. There is evidence both for and against this instrument in the studies reviewed above. This, to an extent, only mirrors the difficulties found in attempts to validate psychological tests in general with various types of populations. The MMPI is far from infallible. In some cases, deliberate attempts at faking

Normalcy go undetected with this test (Exner et al, 1963). This kind of false negative is most likely to occur under conditions of screening. This may explain how nine cases of psychopathology were missed in Weisgerber's study. But there is evidence also that of the more seriously disturbed individuals, relatively few (11%) manage to fake normalcy on the MMPI. These usually have a more favorable prognosis (Grayson & Olinger, 1957). Generally, the MMPI is considered one of the most effective and most valid tests available (Little & Shneidman, 1959).

Special problems arise when attempts are made to validate the MMPI for use in the screening of applicants for religious life. Often the crucial problem is to be found in making an explicit statement of what it is that the test should be a valid measure of and in setting up appropriate criteria for use in validational studies. The available literature has few examples of research designs in which conscious attempts are made to recognize and resolve these problems. There is little uniformity in the criteria used to judge the validity of the MMPI in these studies and there is confusion as to what criteria are appropriate. This may account for much of the difficulty in interpreting MMPI results with religious.

One could consider the previous research on the problem of screening applicants for religious life as having been organized around two major types of research design. The Type I design involves the testing of candidates with some psychological test designed to measure adjustment and psychopathology

and comparing the results with one or more criteria of mental health or mental illness. This kind of research represents an attempt at validating the psychological constructs characterizing a set of tests scores for a particular population. The psychological test characteristically used in the Type I designs is the MMPI. The Type II design, on the other hand, involves either a comparison of the interest patterns of applicants with ideal patterns established on the basis of normative research using successful and satisfied members of particular religious vocations or it involves a comparison of the interest patterns of successful and persevering applicants with the interest patterns of those applicants who leave for lack of a vocation, failure in academic work, etc. (D'Arcy, 1962). The Type II design usually employs the Kuder Preference Record to determine the individual's characteristic interest patterns.

Research clearly limiting itself to one or other of these designs would be relatively easy to conduct and interpret. The studies reviewed above, with the exception of a few, have confused these designs, often using a Type II criterion to evaluate the findings of a Type I measuring instrument. For example, both Weisgerber (1962) and Hispanicus (1962) used persevering in the seminary or leaving it as one of the criteria against which to judge the validity of MMPI findings. Rarely does persevering in o r leaving religious training discriminate between healthy and potentially disturbed applicants. Weisgerber's study (1962) shows this. Faculty ratings are equally questionable criteria for use in a Type I design.

They would seem to be more appropriate to the Type II design.

The use of inappropriate criteria or questionable ones such as faculty rating scales appears to be responsible for much of the growing pessimism with respect to the usefulness of the MMPI for the screening of psychopathology in applicants for religious vocations (Wauck, 1957; Weisgerber, 1962). It has been suggested by some (Bier, 1956; Rice, 1962) that the MMPI be tailored to religious or that special scales be introduced. Others have suggested that the MMPI be replaced by a projective test such as the Thematic Apperception Test (Arnold, 1962). Still others have suggested that perhaps the fault is not to be found in the test as a clinical instrument but in the willingness or unwilliness of researchers to accept it as such (Kobler, 1962). The present writer takes the position that the MMPI should neither be rejected off hand nor accepted at face value as an instrument for the screening of psychopathology in religious life until its validity has been tested against more appropriate criteria. It is suggested that the test be validated concurrently against individually administered projective tests such as the Rorschach which are relatively free of the biasing influence of social and vocational variables.

CHAPTER III

STUDY I: THE DEVELOPMENT OF THE RORSCHACH DEFENSE CHECKLIST

This research project was conducted in two stages. The first stage involved the development of a Rorschach Defense Checklist (RDC) which was to be used along with the other Rorschach scales in testing the hypotheses in the second stage of the research. In the interest of continuity, separate chapters are devoted to these stages along with the procedures, methods and results of each.

Study I was designed to investigate the validity of Schafer's Rorschach sign approach to the identification and appraisal of the organization of an individual's preferred modes of defense. In undertaking this investigation, answers were sought to the following questions: (1) Can Schafer's Rorschach signs of defense be used to differentiate clinical groups to a degree significant beyond chance? and (2) Do the groups of signs identified with classical mechanisms of defense occur with significantly greater frequency among those clinical groups said to be characterized by the use of this or that mechanism of defense?

The Procedure.

Not all of Schafer's groups of signs were studied.

Those selected to be studied fall within the categories of repression, reaction-formation against hostility, intellectualization, isolation of affect, and projection. The signs for each type of defense were grouped in such a way as to compose a checklist. Samples of the checklists, along with explanations of the various Rorschach signs can be found in the Appendix of this report. These checklists provide space for a card by card analysis of the frequency with which a particular sign occurs in a single Rorschach record and a space for noting the presence or absence of a particular sign over the entire record. In this study, however, the investigator attempted only to note the presence or absence of the signs over an entire record.

The Sample. -- In order to study the validity of the Rorschach signs of defense, it was necessary to study the Rorschach protocols of a large sample of clinical patients bearing the diagnoses of hysteric, obsessive-compulsive, and paranoid psychotic. The criteria used in the selection of the cases worthy of use in this study were as follows: (1) that the cases belong to one of the three clinical groups to be studied, (2) that a case history be available, (3) that the case history material support the diagnosis, (4) that the presenting symptoms match the diagnosis with near text book similarity (Fenichel, 1945), and (5) that the MMPI, when available, did not contradict the diagnosis.

The careful examination of over 800 clinical cases, drawn from the clinical files at Loyola University, resulted in the selection o f 67 cases thought to meet the criteria. In each

of these cases the diagnostic picture appeared to be relatively uncontaminated by a mixing of symptoms of other diagnostic types, although in a few cases there was some, though negligible overlap. The majority of these cases had been carefully evaluated and diagnosed by Loyola's clinical staff for use in a series of studies reported by Kobler (1960). It was believed that the selected sample of 67 cases was, in terms of diagnosis, the most clear-cut of those available. Of the 67 cases in the total sample, 25 were diagnosed as hysteric, (Hyst.) 22 as obsessive-compulsive, (Ob-Comp.) and 20 as paranoid psychotics, (Pa.). Table 1 presents the characteristics of the three groups.

Table 1

Characteristics of the Sample

Characteristic	Hyst	Ob-Comp	Pa
Size of the group	25	22	20
Number of Males	7	16	10
Number of Females	18	6	10
Mean age in years	28.8	26.9	28.7
Means years of Education	10.9	13.5	11.3
Mean Wechsler IQ	106.3	117.6	104.9

Table 1 discloses some marked differences between the obsessive-compulsive group and the other groups. The obsessive-compulsive group is composed of intellectually brighter, better

educated, slightly younger, and chiefly male subjects. Since there is no reason to suspect that these variables will influence the Rorschach signs of defense to a significant degree, the investigator felt justified in having employed these groups as they are. Moreover, these characteristics and their distribution follow those reported in the literature and seem to be more or less typical for these groups.

The rationale for studying only these three groups was that the defenses under study are said to be typically employed by these groups, i.e., for each defense or defense pattern being studied there is a corresponding clinical group. For example, of the three groups, the hysterics are expected to demonstrate a significantly greater number of signs of repression in their Rorschach records, while obsessive-compulsives are expected to demonstrate a greater number of signs of reaction-formation, intellectualization, and isolation and paranoid psychotics are expected to demonstrate a significantly larger number of signs of projection.

The Statistical Procedures. -- In studying the validity of the Rorschach signs of defense, the statistical procedures suggested by Cronbach (1949) were followed with only few modifications. After the Rorschach records of each case in the total sample was scored on the list of Rorschach signs of defense, the significance of the distribution of the frequencies with which the signs occurred across the groups was then determined using the Chi-square test for a 3 X 2 contingency table (Spiegel, 1961).

Differences between the groups were considered significant when they were in the predicted direction and reached the .05 level of confidence. Where differences in the expected direction reached the .10 level of confidence, a trend was inferred and the corresponding sign was weighted accordingly in evaluating the overall strength of an individual's preferred mode of defense. The possibility of an inflation of probabilities due to the large number of signs explicitly tested for significance was considered. It is believed that the fact that the hypothesis is directional (one-tailed Chi-square test) serves definitely to cut down the possibility that a number of the significant signs may be due only to chance fluctuations within the sample. In addition, differential weights were applied to the significant signs according to the levels of significance they obtained. This served further to guard against attributing too great a significance to differences that may have occurred on the basis of chance.

Since many of the signs were not expected to yield a large total frequency across the groups, the following rule of thumb was employed: "If there are 2 or more degrees of freedom and roughly approximate probabilities are acceptable for the test of significance, an expectation of only 2 in each cell is sufficient" (Walker & Lev, 1953).

After the significant signs under each mechanism of defense were determined, these signs were scaled, according to the level of significance they attained, in such a way as to add up to a composite score. The usual technique of weighting

based upon a multiple regression formula was bypassed as impractical due to the small size of this sample. Evidence suggests that weights determined by multiple regression techniques with small samples are of little value and might better be replaced by a simple empirical rule of thumb (Cronbach, 1949). Weights ranging from ½ for differences reaching the .10 level of confidence to 3 for differences reaching the .0005 level of confidence were employed in arriving at composite scores for each of the lists of signs characterizing a particular mechanism of defense. Composite scores have a number of advantages. They lend themselves readily to statistical treatment and to comparisons between groups and between individuals. Cronbach (1949) has provided data showing that checklists with composite scores are of greater practical value and validity than almost any other method of analysing Rorschach data.

The reliability of the ratings of the separate measures of defense was studied according to the usual techniques. Two independent raters scored the same Rorschach records and derived composite score. These scores were then correlated (Pearson correlations) with the scores determined by the investigator. In addition, the investigator made a second, independent rating of the signs of defense in the Rorschach protocols and correlated these with his first ratings. This served to determine the stability of the ratings within the originator of the defense checklist. The reliability coefficients are reported and discussed at the end of Chapter IV.

Results and Discussion.

The tables which follow report the frequencies with which each sign of a particular defense was found to occur within the three clinical groups making up the total sample, the Chi-square values of the distribution of these frequencies, and the significance of the Chi-square values.

Table 2 shows that nine of the seventeen Rorschach signs of repression achieve significance beyond the .05 level of confidence in the predicted direction. One sign reaches the .10 level of confidence in the predicted direction and is suggestive of a trend towards significance. Two other signs reached an adequate level of significance but failed to distinguish between the hysterics and the paranoid psychotics. These latter results suggest that poor imaginative resources (less than 2M) and naive realism are not adequate signs of a primary emphasis on the mechanism of repression. These signs may, however, represent behaviors common to both projective and repressive mechanisms. The signs which are significantly related to hysteria directly and therefore to repression indirectly represent tendencies toward the repression of thoughts, fantasies, feelings, and impulses (15 or less R; Narrow interest content; and one to three card rejections), a restriction of the Ego and conspicuous immaturity (unreflectiveness; poor integrative efforts; lack of specificity; and infantile content), and naive, ego-centric, unreflective, and affect-laden thoughts (expressive reactions; phobic verbalizations; C + CF>FC; Sum C>M). "Altogether then, those who

Table 2

Signs of Repression

Rorschach signs	Frequencies within the Groups Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
15 or less R	21	5	9	18.27	<.0005[a]
Less than 2 M	18	3	14	19.57	<.0005[b]
Narrow Interest Content	8	4	7	1.77	NS
Poor integrative efforts	10	1	3	9.93	<.005[a]
1 to 3 card rejections	13	3	6	11.90	<.0005[a]
Naive Realism	7	0	5	7.28	<.025[b]
Unreflectiveness	21	4	2	32.24	<.0005[a]
Expressive Reactions	13	3	3	11.14	<.005[a]
D%>60	4	3	2		NS
Sum C>M	16	8	7	4.97	<.10
C + CF>FC	17	8	8	6	7.56	<.025[a]
1 response per card	1	1	0		NS
Phobic verbalizations	9	3	1	7.42	<.025[a]
Lack of specificity	9	1	1	10.79	<.005[a]
Symbolic content	4	3	2	.01	NS
Infantile content	6	1	0	7.63	<.025[a]
Personal references	15	8	8	3.01	NS

a. Significant in the expected direction.
b. Significant but ambiguous as to direction.

have chronically and extensively relied on repressive defense give the appearance of grown-ups with the Egos of children" (Schafer, 1954). These results indicate that a number of Schafer's signs of repression are valid and serve adequately to differentiate between clinical groups.

Taking the significant signs on this checklist and assigning differential weights according to significance level, the investigator was then able to develop a scale for measuring the intensity with which an individual subject relied on this defense. Table 3 illustrates the weights and how they were assigned to the significant signs of repression.

Utilizing composite scores on the Repression Scale, a median score was computed based upon the scores each of the 67 subjects in the clinical sample. The hysterics had a median composite Repression score of 10.0, the obsessive-compulsives had a median score of 3.5 on the Repression scale and the paranoid psychotics had a median score of 4.0. The median score for the combined groups was 5.05. If this score were to be used as the cutting point in designating subjects as repressors or non-repressors, in the hysteric group there would be twenty-three hits and two false negatives, in the obsessive-compulsive groups seven indicated as repressors, and in the paranoid group, ten, approximately half of the group, indicated as repressors. Obviously the hysterics are far out in front in the use of the repressive defense. But this defense appears to be frequently used in other groups. Yet, where scores in the obsessive-compulsive group and the paranoid group exceed the combined

Table 3

The Repression Scale

Defense sign	Significance level	Weight
15 or less responses	<.0005	3
Poor integrative efforts	<.005	2½
1 to 3 card rejections	<.005	2½
Expressive reactions	<.005	2½
C & CF>FC	<.025	1½
Unreflectiveness	<.0005	3
Phobic verbalizations	<.025	1½
Notable lack of specificity	<.005	2½
Infantile content	<.025	1½
Highest possible composite score		20½

group median, only few fail to achieve strikingly higher scores on another defense scale. Of the seven subjects in the obsessive-compulsive group who scored above the combined group median on the Repression Scale, only one of these failed to achieve a higher score on another defense scale. The same was true of the paranoid subjects above the median. This lends support to the overall validity of Repression Scale for this sample. Since the Rorschach signs were derived by testing the significance of the differences between the clinical groups, a

median test on the Repression scale would be meaningless (Cronbach, 1949).

Table 4 shows the distribution of the frequencies with which Rorschach signs of Reaction-Formation occurred among the groups, the Chi-square value of this distribution, and the significance levels of these signs.

Only six of the Rorschach signs of reaction-formation proved to distribute themselves in the expected direction at an acceptable level of significance. Each of these signs seems not only to have statistical validity, but also face validity. The signs indicating reaction-formation betray the subjects efforts to be cooperative, considerate, always trying to present an image exactly the opposite of hostility, negativism and resistance (R>40 in a spirit of duty and obedience; benign and dutiful card criticism; and volunteering inquiry information). In addition, attempts at denying hostile impulses (rejection of upper red R on card II as heads of humans; and minimizing and prettying up hostile or aggressive imagery) and at exercising a refined control of the impulse life are in evidence (High FC,Fc, FC',Fk). The latter sign (High FC,Fc,FC'Fk) represents the emphasis on a well controlled display of submissive clinging, and ingratiating tendencies as well as delicate sensitivity and the internalization of aggressive impulses. The failure of such signs as the projection of duty laden images, demonstrating helpful attitudes toward the tester, and attempting to adjust the response tempo to the examiner's recording skill, to achieve

Table 4

Signs of Reaction-Formation

Rorschach Sign	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
H>40 in spirit of duty	0	5	1	10.92	<.005[a]
Do responses	4	3	3	.01	NS
Reject upper red (Card II) as human head	1	6	1	6.97	<.025[a]
High Dd (>20%)	1	2	6	6.07	<.025[a]
High FC,Fo,FC',Fk	1	8	1	11.52	<.005[a]
F+% above 90	14	19	11	6.07	<.025[b]
Benign Imagery	6	8	2	3.78	<.10[b]
Minimization of Hostile Imagery	3	11	1	14.10	<.0005[a]
Duty laden images	0	1	1		NS
Helpful-attitudes	3	6	3	1.59	NS
Volunteering inquiry information	3	7	2	3.90	<.10
Adjusting tempo to examiner	0	0	1		NS
Benign card criticism	1	8	2	9.41	<.005[a]

a. Significant in the expected direction.
b. Significant but ambiguous as to direction.
c. Significant but not in the expected direction.

significance appears to be due to the rarity with which they

occur in Rorschach records. One sign, Dd%>20, was significant, but not in the expected direction. It is possible that this sign represents suspiciousness. Another sign, benign imagery, reached significance but it failed to differentiate between obsessive-compulsive neurotics and hysterics. This sign was excluded from consideration in the Reaction-Formation Scale developed later.

To develop the Reaction-Formation Scale, the significant signs were taken, weighted, and combined in such a way as to yield a composite score. Table 5 represents this scale.

Table 5

The Reaction-Formation Scale

Defense Sign	Significance Level	Weight
R 40 in spirit of duty	<.005	2½
Reject upper red D on Card II	<.025	1½
High FC,Fc,FC',Fk	<.005	2½
Minimization of Hostile Imagery	<.0005	3
Benign, Dutiful Card criticism	<.005	2½
Volunteering Inquiry	<.10	½
Highest Possible composite Score		12½

Computing the median score on the Reaction-Fromation Scale for each of the three groups, it was found that the median score for the hysterics was 0.1, for the obsessive-compulsives

3.5, and for the paranoid psychotic 0.5. The combined median for the three clinical groups was 0.4. If the combined median is used as a cutting score there are seven of the twenty-five hysterics above the median, twenty-one of the twenty-two obsessive-compulsives, and fourteen of the twenty paranoid psychotics. Of the seven hysterics above the median score on the Reaction-Formation Scale, none failed to achieve higher scores on the Repression Scale. Of the fourteen paranoids above the median, all but one achieved relatively higher scores on the Projection Scale. Again there is support for the validity of the Reaction-Formation Scale. In making comparisons between the scales, account was taken of the relative differences between the ranges of the scales since the composite scores had not been treated statistically so as to render them directly comparable.

Table 6 shows that eight of the Rorschach signs of intellectualization reached an acceptable level of significance in the predicted direction. One other sign achieved significance. This sign was excluded, however. The sign, Dd%>20, was discussed earlier under the reaction-formation signs.

The signs of intellectualization which were significant reveal attempts at demonstrating a large quantity of ideas (exceptionally wide range of interests in the Rorschach content), pleasure in playing with ideas (test viewed as an intellectual challenge and attempts are made at displaying virtuosity), emphasis upon depth and breadth of cultural attainments (cultured

Table 6

Signs of Intellectualization

Rorschach Sign	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
R>40	0	5	2	6.0	<.025[b]
Test viewed as intellectual challenge with a display of virtuosity	0	8	3	11.49	<.005[a]
Exceptionally wide Interest Content	1	8	3	8.58	<.01[a]
Low with emphasis on perfect W	4	3	3		NS
Cultured content	1	14	0	32.94	<.0005[a]
High Expansive type W	3	4	4		
Low W with pedantic querrulous attitude	2	6	1	5.71	<.05[a]
Dd%>20	1	2	6	6.70	<.025[c]
S>10%	0	3	1		NS
Abstract or arty version of emotional expression	3	9	3	6.59	<.025[c]
Systematic card rotation	0	5	1	7.88	<.01[a]
Studious attitude toward test	3	11	1	17.54	<.0005[a]
Precision, elegance and complexity of verbalization	2	12	2	16.80	<.0005[a]

a. Significant in the expected direction.
b. Significant but ambiguous as to direction.
c. Significant but not in the expected direction.

content), critical, exhaustive, and precise formulations of ideas (low W with pedantic, querrulous attitudes; precision, elegance, and complexity of verbalizations; and systematic rotations of the Rorschach cards), and a generally intellectual orientation (studious attitudes toward the test and the tester; and an arty, abstract version of emotional expression). Combined, these signs formed an Intellectualization Scale. Table 7 shows how the signs were scaled to yield a composite score.

Table 7

The Intellectualization Scale

Defense Signs	Significance Level	Weight
Test Viewed as Intellectual Challenge	<.005	2½
Cultured Content	<.0005	3
Exceptionally wide Interest Content	<.01	2
Abstract-arty Emotional Expression	<.025	1½
Studious attitude toward test	<.0005	3
Systematic card rotation	<.01	2
Precision and complexity of Verbalization	<.0005	3
Low W with Pedantic Attitude	<.05	1
Highest possible composite score		18

The median score for hysterics on the Intellectualization Scale was 0.6. For obsessive-compulsives and paranoids the medians were 4.16 and 2.5 respectively. The combined median for the three groups was 1.14. When the scores for the separate groups were dichotomized into those above and below the combined median the hysterics had only two cases above median, both of which were corrected by higher scores on the repression scale, the obsessive-compulsives had thirteen cases above the median and nine below, and the paranoids had twelve cases above the median. Of the cases in the paranoid group which fell above the median only three failed to obtain higher scores on the projection scale. These three had generalized high scores and appeared to be drawing heavily upon many different types of defense. Of the nine obsessive-compulsives who failed to score above the median on the Intellectualization Scale, a measure of a obsessive-compulsive type defense, all but three failed to achieve higher scores on one of the other defenses usually employed by obsessive-compulsives (reaction-formation and isolation). This scale seemed less able to differentiate the groups although the group medians indicate a definite prevalence of this defense among obsessive-compulsives.

Eighteen signs were tested for significance under the rubric isolation. Table 8 presents the results of the statistical comparisons of the clinical groups on these signs. Thirteen of these signs proved to be significant. Four of these were dropped, however, either because of directional ambiguity

(signs 4,5, and 8) or because they were opposed to the expected direction (sign 1). The nine signs which proved to be fairly clear and acceptable for scaling reflect a tendency to favor ideation over affect or action (more than 3M; noteworthy awareness of one's own though processes), to bury the crucial connection between an idea and its associated affect (color used as FC or R↔C; emotionally loaded percepts delivered without affect), to emphasize logical thinking with the consequent elimination of emotional associations in the interest of achieving objectivity (attitudes of detachment and objectivity; emphasis on exactness and symmetry) to deny the influence of internal emotional excitation (images denoting subjective feelings of coldness), and "to retreat from the world of impulses and emotionally toned interpersonal relationships to a world principally of words and abstractions" (large number of objects in the Rorschach content; machine and mechanical content). The Isolation Scale developed on the basis of these signs and the differential weights associated with each sign can be found in Table 9.

Table 8

Signs of Isolation

Rorschach Signs	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
Dd%>20	1	2	6	6.70	<.025

Table 8 -- Continued

Rorschach Signs	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
F%>75	8	1	3		NS
Extended F%>95	0	0	0		NS
F+%>85	15	20	11	7.77	<.025[b]
Extended F+%>90	12	20	11	10.14	<.005[b]
Lack of impulsivity and impressionism	1	4	3	2.14	NS
More than 2M	0	8	3	10.94	<.005[a]
Low Sum C	8	9	13	5.02	<.05[c]
Minimal use of C',C, or c	7	8	10	2.13	NS
Color used as F/C,C/F or F↔C,C↔F	3	10	0	15.15	<.0005[a]
Machine or mechanical content	0	7	0	15.53	<.0005[a]
Large number of objects in content	1	7	2	7.35	<.025[a]
Emphasis: exactness and symmetry	2	11	3	12.39	<.005[a]
Images: subjective feelings of coldness	0	8	2	12.39	<.005[a]
Statues instead of people	3	5	1	2.58	NS
Attitudes: detachment and objectivity	4	8	2	4.73	<.05[a]
Awareness of own though processes	4	10	1	10.38	<.005[a]

Table 8 -- Continued

Rorschach Signs	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
Emotionally loaded percepts delivered without affect	0	6	0	12.92	<.005[a]

a. Significant in the expected direction.
b. Significant but ambiguous as to direction.
c. Significant but not in the expected direction.

Table 9

The Isolation Scale

Defense Signs	Significance Level	Weight
More than 3H	<.005	2½
Color used as F/C, F↔C C/F or C↔F	<.0005	3
Machine or mechanical content	<.0005	3
Large number of objects in Content	<.025	1½
Emphasis: Exactness and symmetry	<.005	2½
Images: Subjective feelings of coldness	<.005	1½
Awareness of own thought processes	<.005	2½
Attitude: detachment and objectivity	<.05	1
Emotionally loaded percepts delivered without affect	<.005	2½
Highest possible composite score		21

A comparison of the groups on their respective median scores on the Isolation Scale shows the hysterics to have a median score of 1.60, the obsessive-compulsives a median of 6.84, and the paranoids a median of 4.00. This, of course, shows that nothing is lost by scaling the data. The obsessive-compulsives still achieve scores higher than those of any other group on this scale. When the groups are combined to derive an overall median and compared on the number of cases exceeding the group medians the differences between the paranoids and the obsessive-compulsive groups are not obvious. Apparently this is due to the fact that the low scores in the hysteric group tend generally to lower the combined median. In the hysteric group only four cases are above the combined median (3.20). All but one of these cases had a higher score on the Repression Scale. In the obsessive-compulsive group seventeen cases were above the median. Of the five cases at or below the median in this group three failed to achieve high scores on another scale measuring obsessive-compulsive defense. Twelve of the paranoid group achieved scores above the combined median, however, only three of these failed to achieve higher scores on the Projection Scale. Evidently, when attempting to determine an individual's preferred mode of defense, it is important to study the profiling of his defensive efforts. This appears to be the most reliable procedure. The use of the combined median can result in an undue number of false positives and false negatives. It is possible, however to compare groups in terms

Table 10

Signs of Projection

Rorschach Signs	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
More than 15 W	0	2	3		NS
Dd>20%, response overelaborated	0	2	5	7.10	<.025[a]
Over elaboration of any dd response	0	4	5	6.27	<.025[b]
S>5 in record of average size	0	0	1		NS
High arbitrary dr%	1	4	6	5.19	<.05[b]
"Seeing through" the test	1	3	2	.79	NS
F%>60	0	0	2		NS
Low Sum C	8	9	13	5.02	<.05[a]
Low CF	10	7	14	6.70	<.025[a]
M in Dd	1	2	2		NS
M- responses	0	1	1		NS
4 or more rejections	2	0	6	11.13	<.005[a]
4 or less P or→P	12	4	15	13.58	<.005[a]
Profile concentration on F and M	0	5	12	21.20	<.0005[a]
Hd+Ad>H+A	1	2	5	3.56	<.10
Abstract and symbol notations	0	0	1		NS
Confabulations	4	1	4	2.06	NS

Table 10 -- Continued

Rorschach Signs	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
Constricted EB or one weighted heavily on M side	6	5	14	12.85	<.005[a]
Remarks re: card resemblances	2	2	4	1.46	NS
Rejects possible response as inadequate	0	1	1		
Over cautiousness about obvious response	3	3	6	2.41	NS
Record flat and unrevealing	2	3	4	2.05	NS
Interest in what examiner is recording	2	0	5	6.95	<.025[a]
Evasive-defensive inquiry	0	4	5	6.27	<.025[b]
Demands more Explicit instructions	3	7	4	2.56	NS
Emphasis on card similarities and differences	2	1	3		
Hostile card criticism	8	4	5	1.14	NS
Content with erotic threat	1	0	22		
Content with hostile threat	7	18	12	13.86	<.0005[b]
Content with sinister forces	0	4	4	5.07	<.05[b]
Omnipotence thema	1	7	6	6.67	<.025[b]
Externalizes responsibility for percept	2	0	3		
Content signifying surveillance and detection	2	11	15	21.14	<.0005[a]

Table 10 -- Continued

Rorschach Signs	Frequencies within the Groups				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
Interest in what test is "really about"	0	2	5	6.73	<.025[a]
Images of projected hostility	0	5	11	18.27	<.0005[a]

a. Significant in the expected direction.
b. Significant but ambiguous as to direction.
c. Significant but not in the expected direction.

of the central tendency and/or dispersion of their scores on a particular scale without reference to the other scales.

In Table 10 there are a total of eleven signs which reach significance in the expected direction. Some of these have face validity with respect to representing the projective defense. Some of these signs deal with the attribution of hostile intent to other persons or to animals (Images of projected hostility; images denoting surveillances and detection) and others deal with the projection of the intent to entrap or trick (questions as to what the test is "really" about; questions about what the examiner is recording). Many of the signs of Projection which were significant (signs 1,2,3,4,5,6, and 10) signify the use of projection only in an indirect way. They represent, more or less the type of psychological changes brought

about by the heavy reliance on projection as a defense. For example, a Dd%>20 in the context of over-elaborated tiny detail response is suggestive of suspiciousness, while such signs as low CF, less than 4P, profile concentration in the areas of F and M, and Hd+Ad>H+A represent the symptoms accompanying the pathological use of projective defense. Generally, these signs as a group represent a hardening of controls over the behavioral expression of impulses, a withdrawal and isolation from others and a retreat into fantasy.

Eight addition signs of projection reached significance. These, however, were significant either in the wrong direction or demonstrated too much overlap between obsessive-compulsives and paranoids. These signs were not included in the Projection Scale presented in Table 11.

Computations of the median composite scores on the Projection Scale revealed major differences between the three clinical groups (hysterics 2.28; obsessive-compulsives, 5.1; paranoids 12.0). The combined median for these groups was 5.04. Dichotomizing the scores at the combined median revealed three hysterics above the median, ten obsessive-compulsives and all twenty of the paranoids. None of the hysterics above the median failed to achieve higher scores on the Repression Scale, but three of the obsessive-compulsives failed to achieve a higher score on the scales measuring obsessive-compulsive mechanisms of defense (reaction-formation, intellectualization, and isolation). This scale seemed to discriminate

Table 11

The Projection Scale

Defense Sign	Significance Level	Weight
Dd>20% with over-elaboration tiny detail	<.025	1½
Low CF	<.025	1½
More than 3 card rejections	<.005	2½
4 or less P or→P	<.005	2½
Profile concentration in areas of F and M	<.0005	3
EB: constricted or weighted on M side	<.005	2½
Images: surveillance and detection	<.0005	3
Images: projected hostility	<.0005	3
Questions: What test "really" about	<.025	1½
Hd+Ad>H+A	<.10	½
Questions: What examiner is recording	<.025	1½
Highest possible composite score		23

between the groups rather well. The inter-rater reliability of the separate defense scales is discussed at the end of Chapter IV.

CHAPTER IV

STUDY II: SCREENING FOR PSYCHOPATHOLOGY WITH THE RORSCHACH SCALES

This second study constitutes the larger and most important portion of the research. The purpose here was to test the value of the RPRS, the GLS, and the RDC as actuarial instruments in the study of a special problem in the screening of psychopathology.

The Procedure.

The subjects. - In this study the same group of 67 clinical cases were employed along with 90 subjects selected from the students at a large-mid-western minor seminary. The clinical sample was described in Chapter III. There were 25 hysterics, 22 obsessive-compulsives, and 20 paranoid psychotics. The seminary sample consisted of three subgroups: (1) a group of seminarians reported either to have expressed problems in their personal adjustment or to have had two or more MMPI clinical scales with scores above 70 (N=30), (2) a group composed of those seminarians most frequently selected by their faculty, on the basis of naive judgments as most outstanding and best adjusted in the seminary (N=31), and (3) an intermediate group (N=29) drawn randomly from the remaining seminarians who were neither selected as outstanding nor placed in the maladjusted group; none of this group had either reported difficulties in their personal adjustment or had

two or more clinical scales on the MMPI with scores above 70. One difficulty in classifying the groups did arise. There were five cases in the group selected as most outstanding had more than one MMPI clinical scale with a score above 70. Thus, some, though minor, criterion contamination exists in this group. The fact must be kept in mind when studying the results of this investigation. Variations in the design of this research seem to have been more than adequate in controlling the distortions introduced into the results by this unexpected problem. It was planned originally to have 30 subjects in each of the subgroups. After the 90 subjects had been tested, however, it was discovered that the distribution was that noted above.

The Collection of the data. - As was noted earlier (Chapter III) the Rorschach test protocols and MMPI scores of the clinical groups were obtained from the clinical files of the graduate department of psychology at Loyola University. With the seminary group, however, it was necessary to administer the Rorschach test to each of the 90 subjects. MMPI scores on these subjects were made available by the seminary after the Rorschach records had been collected, scored and submitted to the advisor of this research project. Each of the 90 Rorschach were administered individually by the investigator and five qualified assistants. Measures were taken to insure that the investigator would have no way, other than test analysis, of making adjustment ratings of the individual protocols comprising this sample. A code was used in identifying the Rorschach records of the seminary subjects.

The key to this code, revealing which group a particular subject belonged to, was locked in the private files of the investigator's advisor. Only after the investigator had made his blind selections of adjusted and maladjusted seminarians and had submitted these were the true groupings disclosed.

When the Rorschach protocols were all collected and scored according to Klopfer's scoring system, each record was then carefully examined and rated on the RPRS, the GLS, and the RDC. The Rorschach scores of the seminary population were then divided, on the basis of the RPRS, into the 30 records with the highest RPRS scores, the 30 records with the lowest RPRS scores, and the 30 records intermediate to these groups. These groupings by rank order represented the blind or actuarial judgments of the investigator.

With the clinical groups it was necessary only to rate their Rorschach protocols on the RPRS, GLS, and RDC. After this had been accomplished, comparisons were made between the groups to determine the efficiency of these scales within a clinical population.

The Hypotheses. - The specific hypotheses selected for study in this research were:

1. The RPRS and the GLS will discriminate clinical groups, i.e., neurotic versus psychotic subjects, to a degree significant beyond chance.

2. Blind predictions of the faculty designations of seminarians as adjusted or maladjusted can be made on the basis of

the RPRS with success in a number of cases sufficient to exceed chance expectations.

3. When the seminarians are compared with the psychiatric population on the RPRS, the GLS, and the RDC, the seminarians judged as maladjusted will resemble the psychiatric groups to a greater extent than will the seminarians judged as adjusted.

4. Significant differences can be shown to exist between the subgroups of seminarians and clinical population on the RPRS, GLS, and RDC.

The statistical procedures. - Here as in Study I, the statistical treatment of the data followed closely the suggestions of Cronbach (1949) with respect to the appropriate tests of significance to be used with Rorschach data. An extension of the Median Test (Siegel, 1956) was employed in comparing the various groups on each of the Rorschach indices of Ego-structure and Ego-functioning (RPRS, GLS, and RDC). To test the agreement between the blind selections of the investigator and faculty ratings, on the one hand, and between Rorschach scores and MMPI scores on the other, a 2 X 2 Chi-square test was used. As a more general measure of the correspondence between the Rorschach scales and the MMPI, Pearson correlations were computed between the Rorschach scores and the MMPI scores. The significance of these correlations was studied using the .05 level of confidence as the level at which the null-hypothesis would be rejected.

Results and Discussion.

Hypothesis 1. The RDC was shown adequately to dis-

Table 12

Medians of the Clinical groups on the RPRS and the GLS

Group	Rorschach Index							
	M	FM	m	Sb	C	FLR	FPS	GLS
Hysterics	0.46	-0.06	0.23	0.75	0.44	0.37	3.11	3.47
Obsessive-compulsives	1.15	0.41	0.50	1.00	1.00	0.41	4.72	3.62
Paranoids	0.08	-0.04	0.50	-0.17	0.10	-0.17	1.00	3.02
Combined Median	0.66	0.07	0.38	0.58	0.48	0.47	3.16	3.37

criminate between the groups in the clinical sample in Chapter II. Table 12 presents the medians for these three groups on the various components of the HPRS and their medians on the GLS.

Table 12 shows the obsessive-compulsive group to score higher than either the hysteric group or the paranoid psychotic group on each of the Rorschach indices of Ego-strength and Ego-differentiation with the exception of where the obsessive-compulsive neurotics and the paranoid psychotics achieve identical median scores. The fact that the hysterics generally perform at a lower level than the obsessive-compulsive neurotics does not accord with the psychoanalytic genetic psychology which assumes that hysterical neuroses are at a higher genetic level than obsessive-compulsive neurotics (Fenichel, 1945). This may be due to the fact that "pure" hysterics are rarely found in contemporary society and patients bearing this diagnosis often, upon closer examination reveal a number of schizoid traits (Arieti, 1960). Some recent research reporting differences between the hysterics and obsessive-compulsives suggest that on perceptual tasks, such as the Rorschach test, obsessive-compulsives tend generally to achieve higher scores (Witkin et al, 1962). In general, however, the data shows neurotics to be superior to psychotics on each of the Rorschach indices of Ego-strength and Ego-differentiation reported in Table 12. Using the combined medians of the clinical groups on the Rorschach variables in Table 14. Chi-square tests were computed to determine the significance of the differences between the number of cases falling

above and below the median in these groups. Table 13 shows the number of cases above the combined median in each group, the Chi-square value and the significance of Chi-square.

Table 13

The Median Tests for the Clinical Sample on the RPRS components and the GLS

Rorschach Variables	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
Human movement (M)	12	22	5	25.94	<.0005
Animal movement (FM)	12	10	3	5.93	<.05
Inanimate movement (m)	8	11	10	2.03	NS
Shading (Sh)	15	14	6	5.57	<.05
Color (C)	13	17	6	9.43	<.005
Form Level Rating (FLR)	11	11	0	14.11	<.0005
Final Prognostic Score (FPS)	13	16	5	9.55	<.005
Genetic Level Score (GLS)	15	15	4	11.09	<.005

Each of the variables in Table 13 shows a significant difference between the neurotic and the psychotic groups with the exception of inanimate movement (m). This indicates that the neurotic group is more empathic, has a richer inner life and is more interested in others (M), has more awareness of inner strivings and promptings (FM), is better able to handle their needs for affection and approval (Sh), has better control

over their emotional responses (C), are more reality oriented (FLS), have a higher level of Ego-strength and adjustment potential (FPS), and function at a higher genetic level (GLS) than do paranoid psychotics. No true difference seem to exist between these groups with respect to the amount of inner tension they experience between their impulse life and their value systems (m). These results appear to validate hypothesis 1 and to be in accord with what is generally known regarding the differences between neurotic and psychotic patients.

Hypothesis 2. - After the blind selections of the investigator were submitted to his advisor, these selections were compared with the selections made by the seminary faculty on the basis of reports of problems in personal adjustment and MMPI profiles with two or more clinical scales above 70. There was concurrence in ratings of adjustment in 64 of the 90 cases in the sample (71% agreement) ($P<.0002$). A comparison of the cases agreed upon or disagreed upon in the adjusted (N=60) and maladjusted (N=30) groups revealed significantly greater agreement in the "adjusted" group than in the "maladjusted" group. Using a one-tailed the Chi-square value for 1 df=3.57 corrected for continuity ($P<.05$) and 4.57 uncorrected ($P<.025$). The lowest expected frequency to occur in any cell of the Chi-square table was 8.55. This finding supports the value of the RPBS as an actuarial technique for the screening of psychopathology in a nonclinical population although at first hand it would appear that the scale misses 13 cases of "maladjustment" and identifies

13 cases in the "adjusted" group as maladjusted. To understand apparent misses it must be recalled that the faculty criteria for maladjustment were based upon seminarians reports of problems in their personal adjustment and on MMPI profiles where the criterion for adjustment was less than two clinical scales above 70. When the MMPI criterion is reduced to the presence of one or more clinical scales above 70, the predictive value of the BPRS is further enhanced. With this revised MMPI criterion it was discovered that of the 13 cases judged as adjusted by the BPRS but as maladjusted by the seminary faculty nearly one-half, i.e., six had no MMPI scales of 70 or above. Seven, however, did have MMPI scales above 70. None of this seven, however, had higher psychotic than neurotic MMPI profiles. Of the 13 seminarians judged as adjusted by the seminary faculty but as maladjusted by the BPRS, four had MMPI scores of 70 or better and three had inverted MMPI profiles with scores below 40. Inverted profiles are equally interpreted as indicative of maladjustment. Under these conditions the BPRS and MMPI scores agreed in 85% of the cases. Here there were only six clear misses out of the 60 seminarians rated as adjusted by the seminary faculty. These results indicate the BPRS functions exceptionally well as an actuarial method of screening for psychopathology in a non-clinical population.

The median BPRS scores for the three seminary groups were 6.44 for the group rated as most outstanding and best adjusted, 3.58 for the group judged as maladjusted, and 6.00 for

the intermediate group. The combined median EPBS score for the seminary sample was 5.56. Referring back to Table 13, it can be noted that the adjusted seminarians and the seminary sample as a whole score well above the clinical sample (combined median 3.37) on the EPBS. The seminary group judged as maladjusted, however, achieved a median score (3.58) almost identical to the median score of the obsessive-compulsive neurotic group (3.62). This fact serves further to validate not only the EPBS but also the rating procedures employed by the seminary faculty.

Hypothesis 3. - A comparison between the seminary groups and the clinical groups on the components of the EPBS and the GLS is shown in Table 14.

Table 14 shows that the maladjusted seminary group scores lowest on each of the Rorschach indices of adjustment and fairly close to the combined median for the clinical sample. With the exception of their score on form level ratings (FLR), the medians of the maladjusted seminary group resembles more the neurotic clinical groups than the paranoid psychotic group. This suggests that maladjustment in the seminary population is more frequently neurotic than it is psychotic and the obsessive-compulsive type neurosis is most frequently represented. This inference is supported by the literature on mental illness in religious life.

Another striking fact can be derived from Table 14. This fact is that the intermediate group achieves higher scores than the outstanding group on the indices related to articula-

Table 19

Median Scores of the Clinical and Seminary groups on the RPBS and GLS

Groups	M	FM	m	Sh	C	Flr	FPS	GLS
Hysterics	0.46	-0.06	0.23	0.75	0.44	0.37	3.11	3.47
Obsessive-Compulsives	1.15	0.41	0.50	1.00	1.00	0.41	4.72	3.62
Paranoids	0.08	-0.04	0.50	-0.17	0.10	-0.17	1.00	3.02
Combined Median for Clinical Sample	0.66	0.07	0.38	0.58	0.48	0.47	3.16	3.37
Outstanding Seminarians	1.08	0.31	1.00	1.45	1.08	0.82	6.44	3.69
Intermediate Seminarians	1.30	0.69	0.84	1.08	0.96	1.03	6.00	3.85
Maladjusted Seminarians	0.90	0.50	0.77	0.50	0.79	-0.08	3.58	3.42
Combined Median for Seminary Sample	1.08	0.50	0.92	1.07	0.94	0.66	5.56	3.68

tion of the perceptual field and Ego-differentiation (GLS), reality testing (FLS), empathy and interest in others (H), and awareness of one's impulse life (FM). The outstanding group appears to experience more inner tension (m) but also to respond more effectively to emotional stimulation from the environment (C) and to be better able to handle the expression of their needs for affection and approval (Sh). That those subjects who are more responsive to emotional stimulation from others, i.e., more extraverted (C) and who have more strongly developed and well integrated needs for affection and approval should be perceived by the seminary faculty as the best adjusted and most outstanding seminarians is certainly easy to understand. There is something of the nature of construct validity for the RPRB implied in this latter relationship between Rorschach determinats and one's impression on others.

A comparison of the clinical and seminary groups was also made for the various scales in the RDC. Table 15 presents the medians for each of the groups on these scales. This table shows that in the clinical sample there is uneveness between the groups in the use of the different types of defense. This suggests that in the clinical groups where there is considerable homogeneity within the specific subgroups defensive maneuvers are restricted to the use of relatively few types of defense and these defenses are usually employed with exaggerated frequency. The seminary groups, however, show greater versatility in the use of the various mechanism of defense. The maladjusted group

Table 15

Median Scores for the Clinical and Seminary Groups on the HDC

Groups	The Rorschach Defense Scales				
	Repression	R-Formation	Intellec.	Isolation	Proj.
Hysterics	10.00	0.11	0.60	1.60	2.28
Obsessive-Compulsives	3.50	3.50	4.16	6.84	5.10
Paranoids	4.00	0.50	2.50	4.00	12.00
Combined Median for the Clinical Sample	5.05	0.40	1.14	3.20	5.04
Outstanding Seminarians	4.00	2.37	2.90	5.12	4.34
Intermediate Seminarians	4.14	1.62	1.36	5.25	5.67
Maladjusted Seminarians	4.50	0.50	1.90	3.90	5.90
Combined Median for the Seminary Sample	4.00	1.59	2.07	4.91	5.17

appears from the data in Table 15 to use repression and projection more than the other seminary groups but they rely somewhat less on reaction-formation and isolation as mechanisms of defense than do the outstanding seminarians and the intermediate group of seminarians. The foregoing inferences are descriptive in nature and are based only on a cursory inspection of the data in Tables 14 and 15. A statistical study of the differences between the seminary and clinical groups on the various scales is reported under hypothesis 4.

Hypothesis 4. - Under this hypothesis, statistical tests were computed first of all to determine whether significant differences existed between the subgroups in the seminary population and between the subgroups in the clinical population. For the clinical groups significance test were computed only for the MPRS and GLS scores. Since the RDC is based upon differences between the clinical groups it would be spurious to compute significance tests with this scale for the clinical groups. In the seminary population, however, significance tests were computed for each of the Rorschach scales. Table 16 contains the significance of the distribution of cases in the three seminary groups falling above the median on the five defense scales. Since no direction was predicted here a two-tailed Chi-square test for 2 degrees of freedom was employed. This table shows that none of the differences between the seminary groups, as they were selected by the faculty reach the .05 level of significance. One scale, however, reflected a trend that

Table 16

The Median test with the Seminary Sample on the HDC

Defense Scale	Distribution of cases above the Median				
	Outstdn.	Interm.	Maladj.	X^2	p
Repression Scale	14	16	16	0.22	NS
Reaction-Formation Scale	19	15	12	2.72	<.10
Intellectualization Scale	17	19	15	1.32	NS
Isolation Scale	18	17	13	2.29	NS
Projection Scale	14	15	18	1.16	NS

approached significance. This occurred on the Reaction-Formation Scale where the group selected as most outstanding was considerably higher than the other groups ($P<.10$). The scores of the groups on this scale become increasing smaller as they move from the best adjusted group to the maladjusted group. This indicates that the group perceived as outstanding tend to rely on reaction-formation as the preferred mode of defense and thereby display the benign, dutiful, and benevolent traits which go with the use of this defense and tend to elicit exceptionally favorable responses from the seminary faculty and society in general. Otherwise, the extreme heterogeneity within the groups does not allow the other types of defense to approach significance.

A second significance test was computed to determine

whether the 30 subjects in the group the highest RPRS scores differed from the group of 30 subjects whose RPRS scores were the poorest and from the 30 subjects whose RPRS scores were intermediate to these groups. The results of these statistical tests can be found in Table 17. Again a two-tailed Chi-square test with 2 degrees of freedom was employed to test the significance of the distribution of the cases above the median on the defense scales.

Table 17

The Median test with the Seminarians grouped according to the RPRS

Defense Scale	Distribution of cases above the Median				
	High 30	Interm. 30	Low 30	X^2	P
Repression Scale	12	17	19	3.20	<.10
Reaction-Formation Scale	21	15	10	7.78	<.05
Intellectualization Scale	14	14	14		NS
Isolation Scale	16	21	19	13.69	<.01
Projection Scale	16	16	15		NS

Table 17 shows that two of the defense scales differ significantly in their use across the groups; ($P<.05$ with the Reaction-Formation Scale and $P<.01$ with the Isolation Scale). A third defense scale, the Repression Scale, revealed a trend

towards a significant difference across the groups. An inspection of these scales reveals that the 30 cases with the highest RPRS scores utilize the mechanism of reaction-formation against hostility with significantly greater frequency than do the other groups and that the distribution follows the same decline from the best adjusted to the maladjusted groups as it did in the groups as they were selected by the seminary faculty. It might be concluded from this that reaction-formation against hostility is one of the healthier mechanisms of defense. The Isolation Scale an almost reversed distribution with the highest RPRS scores relying less heavily upon this defense than either the intermediate cases or the 30 cases with the lowest RPRS scores. This suggests that isolation is a less desirable type defense mechanism. The trend towards significance noted in the distribution of cases above the group median on Repression was in a direction indicating that this particular defense mechanism tends to occur more frequently in the more poorly adjusted group and is, therefore, a less desirable type of defense also. These findings are in accord with the theoretical and experimental observation of Witkin et al (1962). It would appear from these results that intellectualization and projection do not differ in the frequency of their use by the various groups and that a moderate use of these defenses is not contraindicative of either adjustment or maladjustment.

The next step in the research was to compare the differences between the groups in the clinical sample in the

number of cases above the group median on the BPRS components and GLS and to do the same with the groups in the seminary sample. Table 18 shows the significance of the distribution of cases above the median for each of the BPRS components in the clinical sample. In the Clinical sample direction was predicted

Table 18

The Median Test with BPRS Components and the GLS for the Clinical Sample

BPRS Component	Distribution of cases above the Median				
	Hyst (N=25)	Ob-Comp (N=22)	Pa (N=20)	X^2	P
Human Movement (M)	12	22	5	25.94	<.0005
Animal Movement (FM)	12	10	3	5.93	<.05
Inanimate Movement (m)	8	11	10	2.03	NS
Shading (Sh)	15	14	6	5.57	<.05
Color (C)	13	17	6	9.43	<.005
Form Level Rating (FLR)	11	11	0	14.11	<.0005
Final Prognostic Score (FPS)	13	16	5	9.55	<.005
Genetic Level Score (GLS)	15	15	4	11.09	<.005

since paranoid psychotics are expected to have less Ego-strength and Ego-differentiation than are neurotics. Thus a one-tailed Chi-square test for 2 df was used to test the significance of the distribution of cases above the median on the Rorschach in-

dices in Table 18.

All of the RPRS components with the exception of inanimate movement scores distinguished the neurotic groups from the psychotic group. The inanimate movement scores did not differ significantly. Differences between the neurotic groups could be inferred only on Human Movement and Color. Here the obsessive-compulsive group has a larger number of cases above the median than the hysteric group. In all the cases where significant differences were noted between the three groups, the paranoid psychotic group had markedly lower scores. Obviously, the RPRS draws sharp distinctions between neurotic and psychotic patients. M and FLR appeared to be the best predictors in this sample although all but one of the other signs differentiate the groups at a high level of confidence. The fact that M and FLS were the best predictors in this sample accords with the findings of Mindess (1953).

The GLS discriminated significantly ($P<.005$) between the neurotic and psychotic groups also. It did not distinguish, however, between the neurotics in the sample. This scale appears to be less refined than the RPRS but, contrary to the findings Goldfried (1962), it seems adequately to separate neurotics from psychotic subjects. The inability of the GLS to discriminate between types of symptoms within a single gross diagnostic category, such as the neurotics in this sample, has been reported also by Wilensky (1959) and Lane (1960).

A comparison of the seminary groups, as they were select-

ed by the seminary faculty, on the RPRS components and on the GLS is presented in Table 19. The Chi-square tests for this group was also a one-tailed test with 2 df.

Table 19

The Median Test with the RPRS components and the GLS in the Seminary Sample

RPRS Components	Distribution of Cases above the Median				
	Outstdn.	Interm.	Maladj.	X^2	p
Human Movement	10	12	6	4.01	<.10
Animal Movement	12	18	15	3.24	<.10
Inanimate Movement	24	20	19	1.17	NS
Shading	17	15	10	3.07	NS
Color	22	20	17	1.32	NS
Form Level Rating	16	20	5	16.93	<.0005
Final Prognostic Score	20	16	8	9.36	<.005
Genetic Level Score	16	21	8	12.40	<.005

The data in Table 19 shows that the Final Prognostic Score (FPS) of the RPRS distinguishes significantly between adjusted and maladjusted seminarians with the best adjusted seminarians having the largest number of cases above the median for the entire seminary sample. Of the various components of the RPRS which combine to yield the FPS only the Form Level Ratings distinguished between the groups significantly (P<.0005).

Human Movement scores (M) and Animal Movement scores (FM) approach significance ($P<.10$) but failed to exceed the required level of .05. Thus only reality testing (FLR) and overal Ego-strength (FPS) were able to differentiate between the adjusted and maladjusted seminarians in this sample. The GLS also reached significance ($P<.005$) in distinguishing the adjusted from the maladjusted seminarians.

The overall results indicate that two of the Rorschach defense scales, Reaction-Formation and Isolation, and possibly a third, Repression, are capable of separating adjusted from maladjusted seminarians. The various components of the HPRS with the exception of a distinguish between neurotic and psychotic patients in the clinical sample, but only two of these components (FLR and FPS) distinguish between adjusted and maladjusted seminarians at an acceptable level of confidence. The GLS was able to distinguish neurotic from psychotic subjects and adjusted from maladjusted seminarians at an acceptable level of confidence and to distinguish outstanding seminarians from average seminarians. The GLS failed, however, to distinguish obsessive-compulsive neurotics from hysteric neurotics. Both the HPRS and the GLS appear to function efficiently as actuarial methods of screening psychopathology both in clinical and non-clinical populations. There is, perhaps, no reason to marvel at the ability of these scales to distinguish between neurotic and psychotic patients. The Rorschach has always been able to accomplish this. But to be productive of significant results

in screening for psychopathology in nonclinical population is a more respectable accomplishment for the Rorschach test (Harris, 1960).

Intercorrelations between the Rorschach Scales and the MMPI.

Although significant differences have been shown to exist between clinical groups and between adjusted and maladjusted seminarians on the RDC, RPRS, and GLS, there is little information available from the data as to the inter-relationships among these variables or their relation to psychopathological symptoms. Table 20 presents the intercorrelations among these Rorschach variables and MMPI scores.

The Rorschach Defense Checklist. - The Rorschach defense scales employed in this study each demonstrated significant correlations with variables related to personality structure and personality processes as these are measured by the components of the RDC, the RPRS, and the GLS. All but one of the defense scales (Isolation) demonstrated significant correlations with one or more of the symptoms of psychopathology measured by the MMPI.

Significant negative correlations were found to exist between scores on the Repression Scale and the variables R-F ($P<.01$), Isol ($P<.001$), M ($P<.01$), FM ($P<.05$), FPS ($P<.01$), and Mf ($P<.05$). On the other hand, significant positive correlations were found between scores on the Repression Scale and H_s ($P<.05$), D ($P<.05$), and Hy ($P<.01$). These findings indicate that persons who use repression as a mode of defense are not

Table 20

Intercorrelations between the Components of the Three Rorschach Scales and the MMPI

R	Rep	R-F	Int	Isol	Proj	M	FM	m	Sh	C	Flr	FPS
R	-.33[a]	.53[a]	.36[a]	.56[a]	.13	.22[c]	.20[c]	.31[a]	.18[c]	.13	-.17[c]	.25[b]
Rep		-24[b]	-.14	-.30[a]	-.12	-.26[b]	-.19[c]	-.14	-.06	-.07	-.11	-.23[b]
R-F			.49[a]	.51[a]	.04	.20[c]	.31[a]	.19[c]	.18[c]	.16	-.02	.32[a]
Int				.44[a]	.16	.06	.18[c]	.23[b]	.10	-.04	-.16	.07
Isol					.05	.24[b]	.20[c]	.17	.05	.00	-.17	.14
Proj						-.03	.06	.10	-.07	-.06	-.32[a]	-.14
M							.40[a]	.19[c]	.16	.28[b]	.23[b]	.58[a]
FM								.23[b]	.24 [b]	.28[b]	.23[b]	.53[a]
m									.10	.19[c]	-.02	.35[a]
Sh										.17	.29[a]	.51[a]
C											.32[a]	.54[a]
Flr												.50[a]
FPS												
GIS												

a. Significant at the .001 level.
b. Significant at the .01 level.
c. Significant at the .05 level.

Table 20 -- Continued

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	GLS	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma
R	-.14	.07	.05	.05	-.16	-.06	-.14	-.10	.16	.01	.01	.03	.02
Rep	-.14	.01	.15	-.07	.22[c]	.19	.27[b]	.11	-.18[c]	-.03	.08	.09	.00
R-F	.10	.10	-.15	.15	-.16	-.13	-.16	-.03	.01	-.05	-.05	-.06	.06
Int	-.08	-.08	-.07	.10	-.14	-.22[c]	-.14	-.14	.19[c]	-.05	-.05	-.01	.02
Isol	-.10	-.09	-.03	-.01	-.08	-.13	-.11	-.13	.15	-.06	-.03	.03	.04
Proj	-.13	-.09	.21	-.12[c]	-.08	-.03	-.08	-.01	.04	.27[b]	.16	.26[b]	.21[b]
M	.45[A]	.28[b]	-.29[A]	.05	-.12	-.27[b]	-.21[b]	-.29[A]	-.01	-.19[c]	-.17[c]	-.20[c]	-.09
FM	.39[A]	-.14	-.27[b]	.01	-.25[b]	-.32[A]	-.28[b]	-.18[c]	.06	-.16[c]	-.36[A]	-.27[b]	-.17[c]
m	.14	.00	-.18[c]	.10	-.20[c]	-.17[c]	-.26[b]	-.23[b]	.01	-.21[b]	-.21[b]	-.17[c]	-.21[b]
Sh	.30[A]	.06	-.17[c]	.21[b]	.03	-.14	-.03	-.06	-.04	-.10	-.17[c]	-.22[b]	-.21[b]
C	.38[A]	.02	-.12	-.01	-.08	-.02	-.12	-.12	-.08	-.13	-.11	-.16[c]	-.11
Flr	.65[A]	-.05	-.26[b]	-.16[c]	.00	-.14	-.10	-.16[c]	-.04	-.27[b]	-.19[b]	-.32[A]	-.20[c]
FPS	.61[A]	-.09	-.31[A]	.09	-.13	-.28[b]	-.25[b]	-.28[b]	.02	-.31[A]	-.32[A]	-.35[A]	-.23[b]
GLS		-.14	-.28[b]	.12	-.12	-.21[b]	-.21[b]	-.19[b]	-.05	-.27[b]	-.22[b]	-.34[A]	-.10

A. Significant at the .0005 level.
b. Significant at the .001 level.
c. Significant at the .01 level.
d. Significant at the .05 level.

likely to use either reaction-formation or isolation of affect in their defensive strategies; they tend to be unable to make adequate use of their imaginative or creative resources, to handle conscious awareness of their impulses, or to tolerate inner tensions. They tend to have poor Ego-strength and to adhere to sex-role expectations defined by their society. The symptoms they are likely to exhibit are those of hypochondriasis, depression, and hysteria. These findings are consistent with classical discussions of the relationship between the use of repression as a mode of defense and personality functioning.

Scores on Reaction-Formation were found to have significant positive correlations with Int ($P<.001$), Isol ($P<.001$), M ($P<.05$) FM ($P<.001$), m ($P<.05$), Sh ($P<.05$), FPS ($P<.001$). No significant correlations were found between reaction-formation and MMPI scales, although there were tendencies toward significant negative correlations with H_s ($P<.10$) and Hy ($P<.10$). What is indicated here is that the use of reaction-formation against hostility as a mode of defense frequently occurs in the context of the use of the related defenses, intellectualization and isolation of affect. In addition, there are indications that those who use reaction-formation against hostility in their repertoire of defenses tend to make adaptive use of their creative resources, to be capable of handling conscious awareness of their impulses, of tolerating inner tensions, and of integrating their needs for affection. Generally, they have strong and resourceful Egos. Although no significant relationship was found between the use of reaction-formation and any

MMPI measure of psychopathology, there were suggestions of a tendency in those who employ this defense not to show the symptoms of hypochondriasis or hysteria.

Significant correlations were found to exist between intellectualization and R-F ($P<.001$), Isol ($P<.001$), FM ($P<.05$), m ($P<.01$), and Mf ($P<.05$). Only one negative correlation proved to be significant. This was with D ($P<.05$). Aside from the fact, mentioned above, that intellectualization, reaction-formation against hostility, and isolation of affect are related defenses, these data indicate that intellectualizers tend to be characterized by an ability to handle in an adaptive manner conscious awareness of their impulses and inner tensions. In addition they tend to have inverted interest patterns and are relatively free of symptoms of depression. It appears from these data that intellectualization, in and of itself, is a relatively innocuous mechanism of defense.

It has been noted above that scores on the Isolation Scale correlate significantly with scores on the Reaction-Formation Scale and the Intellectualization Scales. The only other variables with which this scale correlated were M ($P<.01$), FM ($P<.05$), m ($P<.05$) and FLr ($P<.05$). All of these correlations were positive with the exception of the correlation with Flr. No significant correlations were discovered between isolation of affect and the MMPI. This indicates that the use of isolation of affect as a mechanism of defense is correlated with a rich inner life, characterized by a resourceful imagination,

conscious awareness of impulses, and the ability to master inner tensions, on the one hand, but with faulty reality testing on the other. Apparently, those who utilize isolation of affect as a mechanism of defense turn inward toward a fantasy life that has realistic and adaptive characteristics, but their relations with external reality suffer thereby.

No significant correlation was found to exist between projection scores and scores on the other defense scales. But on the other hand significant positive correlations were discovered between projection scores and the MMPI variables F ($P<.05$), Pa ($P<.01$), Sc ($P<.01$), and Ma ($P<.05$), and a significant negative correlation between projection scores and Flr ($P<.001$). The interpretation suggested by these data is that persons who rely on projection as a means of defense are inclined toward faking on the MMPI; they are suspicious; they manifest tendencies toward autistic thinking; they entertain expensive, grandiose fantasies; and they demonstrate faulty reality testing.

The RPRS. - - Since the RPRS is supposedly a measure of Ego-strength, it is to be expected that each of its components with correlate negatively with MMPI scales. Thus, the testing of the hypothesis that the correlation is zero in the population requires only a one-tailed test of significance. The components of the RPRS met this expectation; each of the components correlated negatively with the MMPI scales measuring psychopathology. For correlations between the RPRS and the

other Rorschach scales (RDC and GLS) a two-tailed test of significance was employed for 136df. There were 138 cases in the sample used in computing the intercorrelations. All 90 of the seminarians were in the sample. However, only 48 of the clinical cases had MMPI records available.

Significant negative correlations were found between M and L ($P<.01$), F ($P<.0005$), D ($P<.01$), Hy ($P<.01$), Pd ($P<.0005$), Pa ($P<.05$), Pt ($P<.05$), Sc ($P<.05$). On the other hand, a significant positive correlation was found between M and GLS ($P<.0005$). This indicates that people who have the ability to use imaginative resources adaptively are not given to lying or faking on the MMPI and tend to be relatively free of pathological symptoms such as depression, psychopathy, suspiciousness, psychasthenia, and autism or schizoid thinking. Moreover, they have well differentiated Egos. It was pointed out earlier that the effective use of imaginative resources takes place in the absence of the use of defensive repression, but is often found in the context of defensive reaction-formation and isolation of affect.

FM correlates negatively with F ($P<.01$), Hs ($P<.01$), D ($P<.0005$), Hy ($P<.01$), Pd ($P<.05$), Pa ($P<.05$), pt ($P<.0005$), Sc ($P<.01$), Ma ($P<.05$), and Rep ($P<.05$). A positive correlation was found to exist between FM and GLS ($P<.0005$), R-F ($P<.001$), Int ($P<.05$) and Isol ($P<.05$). These data can be interpreted as indicating that a healthy awareness of one's impulses is associated with an avoidance of faking on the MMPI

and with the relative absences of symptoms of emotional disturbance such as hypochondriasis, depression, hysteria, psychopathy, suspiciousness, psychasthenia, autistic thinking, and grandiosity. In addition, a healthy awareness of one's impulses is associated with a well differentiated Ego, a tendency to avoid the use of repression as a mode of defense, and to more frequently employ the defenses reaction-formation and intellectualization. The correlation between m and the MMPI scales follows a pattern identical with that of FM with the exception that there are small variations in the levels of significance on the MMPI with which they mutually correlate. On the EDC, m was found to correlate significantly with R-F ($P<.05$), Int ($P<.01$), and Isol ($P<.05$). Thus, the interpretation of these results are essentially the same as those for FM. It must be added, however, that those who are capable of handling inner tensions (m) also tend to employ intellectualization in their systems of defense.

Shading scores (Sh) on the RPBS were found to bear a significant positive relationship with R-F ($P<.05$), GLS ($P<.0005$), and K ($P<.01$) and a significant negative relationship with F ($P<.05$), Pt ($P<.05$), So ($P<.01$) and Ma ($P<.01$). This indicates that the ability to integrate one's needs for affection is related to the use of reaction-formation as a defensive strategy, a relatively well differentiated Ego, frequent use of self-deception, a tendency to avoid faking on the MMPI, and the relative absence of the more serious symptoms of psychopathology,

psychoasthenia, autistic thinking, and grandiosity. The ability to manage one's emotional response to environmental events (C) was found to correlate significantly with Ego-strength (FPS) and Ego-differentiation (GLS), both at the $P<.0005$ level of confidence. C was correlated with only one of the MMPI scales (Sc) and this correlation was negative ($P<.05$), indicating that the ability to manage emotional response tends to occur in the absence of autistic thinking.

Significant negative correlations exist between FLR and Isol ($P<.05$), Proj ($P<.001$), F ($P<.01$), Pd ($P<.05$), Pa ($P<.01$) Pt ($P<.05$), Sc ($P<.0005$), and Ma ($P<.05$). A significant positive correlation was found to exist between FLR and GLS ($P<.0005$) and K ($P<.05$). This suggests the interpretation that adequate reality testing (FLR) occurs in the relative absence of the use of isolation of affect and projection as mechanisms of defense. Further, adequate reality testing appears to contraindicate faking on the MMPI and the presence of such disorders as psychopathy, paranoid suspiciousness, psychasthenia, autistic thinking, and grandiosity. On the other hand, adequate reality testing is associated with a differentiated Ego and the presence of the unconscious wish to present a benign image of oneself.

The FPS of the BPRS is a summary score which is made up of the BPRS components. This score was found to correlate positively with E-F ($P<.001$) and GLS ($P<.0005$), and negatively with Rep ($P<.01$), F ($P<.0005$), D ($P<.01$), Hy ($P<.01$), Pd ($P<.01$), Pa ($P<.0005$), Pt ($P<.0005$), Sc ($P<.0005$), and Ma ($P<.01$). These

data indicate that a strong Ego tends to utilize reaction-formation as the defense of choice; that it is relatively well differentiated, avoiding repression which has consistently shown up as a pathogenic defense; and that it is relatively free of psychoneurosis and psychosis generally and depression, hysteria, psychopathy, suspiciousness, psychasthenia, autistic thinking, and grandiosity specifically. These results appear to present data crucial to the validation of the construct Ego-strength which is posited as underlying the EPBS.

No significant correlations were discovered to exist between the GLS and the EDC in this study. This indicates that the type of defense one is likely to employ in warding off mental conflicts is not dependent upon the extent to which his Ego has achieved differentiation. These findings are identical with those reported by Witkin et al (1962). Significant positive correlations were found to exist, however, between the GLS and all but one (m) of the components of the EPBS. In each of the significant correlations the value of P was $<.0005$. Significant negative correlations were found to exist between the GLS and the MMPI items, F ($P<.01$), D ($P<.01$), Hy ($P<.01$), Pd ($P<.01$), Pa ($P<.01$), Pt ($P<.01$) and Sc ($P<.0005$). These results may be interpreted as indicating that the more differentiated the Ego, the better is one able to make use of creative resources (M), to integrate his impulses (FM) and his needs for affection (Sh), and to exercise control over his emotional responses (C). Moreover, Ego-differentiation is associated with

adequate reality testing (FLR) and Ego-strength (FPS) the tendency to avoid faking on the MMPI, and a relative freedom from symptoms of depression, hysteria, psychopathy, suspiciousness, psychasthenia, and autistic thinking.

The general conclusion that may be derived from this analysis of the intercorrelations between the scales used in this study and the MMPI is that each of the scales has demonstrated some ability to reflect various aspects of Ego-structure and Ego-functioning which are cross-validated by other tests. These findings might well contribute to ongoing efforts to determine the psychological dimensions underlying Rorschach scores and would appear to provide valuable information for use in individual diagnosis.

The Reliability of the RDC.

Attempts at establishing the reliability of the various defense scales proved to be rather discouraging. An independent rater scored each of the Rorschach protocols used in the study for the defense according to the definitions of the signs given in the appendix. When his ratings were correlated with those of the investigator the inter-rater reliability for the various defense scales was as follows: Repression .57, Reaction-Formation .60, Intellectualization .68, Isolation .70, and Projection .65. The average correlation was .64. Efforts were then made to determine whether the unreliability was a function of the definitions of the items or the rater. A second independent rater repeated the scoring of the defense scales for each of the

protocols used in the study. The correlation between his ratings and those of the investigator did not improve upon those between the first rater and the investigator. In this case the inter-rater reliability followed this pattern: Repression .54, Reaction-Formation .46, Intellectualization .59, Isolation .83, and Projection .59. The average correlation was .60.

In a final attempt to judge the reliability of the signs of defense, the investigator performed a second, independent rating of the defense scales over the total sample, having no reference to his first ratings. When the first and second ratings were correlated the results were as follows: Repression .98, Reaction-Formation .91, Intellectualization .93, Isolation .95, Projection .93. The average correlation was .94.

These results indicate that a single rater may achieve a high level of consistency in his method of rating signs of defense on the Rorschach. But it would appear that the items making up the defense scales are not defined in a clear enough fashion to be productive of inter-rater agreement. This is a serious indictment against RDC and indicates that it is not yet ready for other than experimental use. The defense signs making up the scales need to be defined in a more rigorous manner. It is not enough that the investigator knows what he means by a particular Rorschach sign. If a method of investigation is to meet the criteria of science it must be communica-

ble, objective, and reliable. The failure of independent raters to replicate the investigator's scoring of the various defense scales leaves the validity of findings with these scales open to serious question.

CHAPTER V

SUMMARY AND CONCLUSIONS

Research on the validity of the Rorschach test has been largely equivocal. A number of reviews have demonstrated that failures with the Rorschach test in the identification of various kinds of personality traits and functions are often due to statistical abuses, the lack of an adequate theory of personality with which to correlate Rorschach data, the extreme complexity of Rorschach scores and patterns of scores. Moreover, it has been demonstrated that actuarial techniques can produce valid descriptions of personality traits and valid prognostications in far less than the amount of time required for the clinical interpretation of the Rorschach protocol.

Remedies to these problems have been suggested by a number of leading psychologists. It has been suggested that psychoanalytic-Ego psychology provides an adequate theory for the interpretation of Rorschach test responses. In addition, it has been suggested that the use of rating scales and checklists for complex Rorschach data cannot only solve many of the statistical problems encountered by the Rorschach technique, but that these methods can also allow actuarial predictions with the Rorschach test. The economy of time and effort that would be involved in the actuarial use of the Rorschach protocol

have obvious merits. If the test could indeed be adapted for actuarial use it could make a significant contribution to large scaled screening programs.

The present study was designed to explore the value of three Rorschach scales which purport to assess Ego-structure and Ego-functioning when these scales are used in a program of screening for psychopathology. The scales chosen for use in this study were the RPES, the GLS, and a RDC. These scales integrate psychoanalytic Ego-psychology with modern techniques of scaling Rorschach data. To study the effectiveness of these scales a special problem in the screening of psychopathology in religious life was studied. This problem seemed especially challenging because other actuarial techniques which relied exclusively upon the subjects conscious report left room for doubt that the established norms could be applied directly to seminarians who live a special kind of life, one which would be considered abnormal outside the seminary.

This study attempted to determine whether or not MMPI ratings of adjustment and maladjustment would be supported by projective test results. It was reasoned that projective tests would be less subject to the influence of social and vocational variables as well as to attempts at faking. It was hypothesized that the data provided by the Rorschach scales would support the MMPI results in the seminary population. If the hypothesis was validated it would mean that MMPI results might be accepted at face value and the Rorschach scales might effectively be

added to the test batteries employed in seminaries to screen for psychopathology.

Empirical studies related to the scales employed in this investigation and to the problem of screening for psychopathology in religious life were subjected to a critical review. The literature bearing on the application of psychoanalytic-Ego psychology to Rorschach test interpretation was reviewed briefly with special emphasis on its merits. Rorschach experts generally favored this approach.

The literature on the Rorschach Prognostic Rating Scale and the Genetic Level Score showed these instruments to have outstanding validity compared to other Rorschach techniques. The limitations of these scales were noted also. These scales were reported to detect psychopathology consistently and to differentiate degrees of severity in psychopathology. In relatively homogeneous groups, however, their ability to discriminate between groups was less consistent.

Efforts to discover a well-developed method for assessing preferred modes of defense in the literature proved discouraging. Schafer's Rorschach signs of defense appear to be the most promising of the available techniques but the literature disclosed few attempts at subjecting these signs to a detailed validity study. The need for such studies was pointed out along with some considerations as to how a Rorschach Defense Checklist (RDC) might be developed.

In order to study further the validity of the RPRS and the GLS and to develop a RDC a group of clinical cases were

drawn from the files at Loyola University. Five groups of Schafer's signs of defense were selected for study. These signs represented the following defense mechanisms: repression, reaction-formation against hostility, intellectualization, isolation of affect, and projection. These defenses are reported by the literature to be employed differentially by the clinical groups studied (hysterics, obsessive-compulsives, and paranoid psychotics). The Rorschach protocols for this sample were carefully examined and scored for the presence of the various signs of defense. Those signs which occurred with significantly greater frequency within the expected groups were then scaled and separate defense checklists were developed to measure the intensity with which each type of defense was employed in a Rorschach protocol.

Next the Rorschach protocols of the clinical sample were examined and scored on the RPRS and the GLS. These scales each yielded significant differences between the neurotic and psychotic groups but not between the hysteric and obsessive-compulsive neurotic groups. These results supported the validity of the RPRS and the GLS for use in the screening of gross differences in levels of adjustment.

In the second phase of this research, the RPRS, the GLS, and the RDC were applied to the problem of screening for psychopathology in religious life. The subjects employed in this phase of the research were 90 minor seminarians sub-divided into three groups of 30 each. One group consisted of seminarians

judged as the best adjusted and most outstanding of the members of the minor seminary, a second groups consisted of seminarians described as maladjusted by criteria such as the report of problems in personal adjustment or obtaining scores of 70 or more on two or more MMPI clinical scales. The third group consisted of seminarians who were neither placed among the best adjusted nor among the maladjusted. Efforts at identifying the members of each of these groups solely upon the basis of ranking RPRS scores and designating the highest 30 cases as best adjusted, the lowest 30 cases as maladjusted, and the intermediate 30 cases as identical to the true intermediate sample met with success in 71 percent of the cases. Rechecking the MMPI scores of the seminarians against their RPRS scores it was found that there were only 13 cases out of 90 in which the blind ratings were at variance with the MMPI results. These results indicate not only that the RPRS performs exceptionally well as an actuarial instrument but also that MMPI results in the seminary population can probably be accepted at face value in all but a very few cases.

The next step in the investigation involved comparing the seminary groups on the various components of the RPRS, on the CLS, and on the Rorschach defense scales. It was hypothesized that these scales would differentiate the adjusted from the maladjusted groups with an acceptable degree of significance ($P < .05$).

The results of the comparisons revealed that of the

EPSS components only the Form Level Ratings (FLR) and the Final Prognostic Score (FPS) distinguished between the groups in the expected direction beyond chance. The differences between the groups on Human Movement (M) and Animal Movement (FM) approached significance ($P<.10$) and were suggestive of trends toward real differences. The Genetic Level Score, on the other hand, distinguished the adjusted from the maladjusted groups at a high level of significance ($P<.0005$).

When the seminary groups were compared on the EDC it was found that no significant differences existed between the groups on either of the defense scales. Only the Reaction-Formation Scales reflected a trend towards significance in the differences between the groups ($P<.10$). The group selected as most outstanding had the largest number of cases above the combined median of the total seminary sample. It was suggested that reaction-formation against hostility tends to promote the type of behavior likely to be prized by the seminary faculty. In order to look at the Rorschach defense scales in still another light, the groupings based upon the EPRS ranks were compared on each of the defense scales. The results showed significant differences to exist between those groups in the employment of the defenses, reaction-formation against hostility ($P<.05$) and isolation of affect ($P<.01$). Differences on the Repression Scale approached significance ($P<.10$). Interestingly the differences on the Reaction-Formation Scale followed the same direction in this grouping as it did in the original groups with the best adjudged

group scoring highest. On the Isolation Scale and the Repression Scale, however, the group with the highest RPRS scores had the lowest scores. Little if any difference existed between the intermediate group and the group with the lowest RPRS scores on the latter two defense scales. These results failed to support the value of the RDC in screening for psychopathology in religious life although there appears to be a significant relationship between Rorschach ratings of Ego-strength (RPRS) and certain mechanisms of defense.

It might be concluded from the results of this study that the RDC may be of significant value when used in the screening of psychopathology in clinical groups. It seems to possess little value, on the other hand, for screening in non-clinical population. Of course these results are only tentative and the scale was validated on a relatively small sample. Further efforts at refining the RDC with clinical subjects are sorely needed. Moreover, it would seem to be of definite value to normalize the distribution of scores on the various defense scales, thereby rendering the possibility of direct comparisons and profiling of the scales. But before any of this can be done it is vital that the definitions of the signs used in these scales be clarified and made more objective. In their present condition these scales yield poor inter-rater reliability.

The value of the RPRS and the CIS as actuarial techniques for the screening of psychopathology in clinical groups and in religious life is generally supported by the results of

this study. The underlying constructs represented in these scales, i.e., Ego-strength, adjustment potential, and Ego-differentiation also gain a degree of validation in this study. Scoring these scales can be mastered with relative ease and it would seem that they could become indispensable to efforts at screening psychopathology where the results of self-appraisal techniques are ambiguous or open to doubt.

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APPENDIX A

SAMPLE: THE RORSCHACH DEFENSE CHECKLIST

CODE #.....

THE RORSCHACH DEFENSE CHECKLIST

* DEFENSE INDICATOR **	RORSCHACH CARD NUMBER I	II	III	IV	V	VI	VII	VIII	IX	X	CHECK SPACE	WEIGHT
REPRESSION:												
1. 15 or less responses												3
2. Poor integrative efforts												2½
3. 1-3 card rejections												2½
4. Expressive reactions												2½
5. C+CF > FC												1½
6. Unreflectiveness												3
7. Phobic Verbalisations												1½
8. Notable lack of specificity												2½
9. Infantile content												1½
TOTAL												
REACTION-FORMATION:												
1. R > 40 in aspirit of duty and obedience												2½
2. Rejects upper red D on Card II as heads of humans												1½
3. High FC, Fc, FC', Fk												2½
4. Minimization or prettying up hostile imagery												3
5. Benign, dutiful card criticism												2½
6. Volunteering inquiry information												½
TOTAL												
INTELLECTUALIZATION:												
1. Test viewed as intellectual challenge with virtuosity												2½
2. Cultured Content												3
3. Exceptionally wide interest content.												2
4. Arty-abstract version of emotional expression												1½
5. Studious Attitude												3
6. Systematic card rotation												2
7. Precision, elegance, complexity of verbalizations												3
8. Low W with Pedantic attitude												1
TOTAL												

CODE#..... THE RORSCHACH DEFENSE CHECKLIST

DEFENSE INDICATOR	RORSCHACH CARD NUMBER I	II	III	IV	V	VI	VII	VIII	IX	X	CHECK SPACE	WEIGHT
ISOLATION:												
1. More than 3M												2½
2. Color used as F/C, F⟷C, C/F or C⟷F												3
3. Machine or mechanical content												3
4. Large number of objects in content												1½
5. Emphasis: exactness and symmetry.												2½
6. Images: subjective feelings of coldness												2½
7. Noteworthy awareness of own thought processes												2½
8. Emotionally loaded percepts given without affect												2½
9. Attitudes of detachment & objectivity												1
TOTAL												
PROJECTION:												
1. Dd > 20% with overelaboration of tiny detail												1½
2. Low CF												1½
3. More than 3 card rejections												2½
4. 4 or less P or near P												2½
5. Profile concentrated in areas of M, m, FM and F												3
6. Constricted EB or one heavily weighted on the M side												2½
7. Images denoting surveillance and detection												3
8. Images of projected hostility												3
9. Questions as to what the test is "really" about												1½
10. Hd + Ad > H + A												½
11. Questions about what the examiner is recording												1½
TOTAL												
MIXED:												
1. Overelaboration of tiny detail												1½
2. Evasive-defensive inquiry												1½
3. Content with hostile threat												3
4. Themes of omnipotence & status												1½
TOTAL												

APPENDIX B

A GUIDE TO SCORING THE RORSCHACH DEFENSE CHECKLIST

REPRESSION ITEMS:

1. 15 or less responses is scored when it characterizes the performance proper of the protocol, i.e., when the number of main responses is 15 or less.

2. Poor integrative efforts is scored where the record contains many vague forms and there is little effort to achieve combinatory wholes or to inter-relate separate details in a blot.

3. Self-explanatory.

4. Expressive reactions is scored when the subject emits emotionally toned, spontaneous reactions to a plate when it is induced. Examples are: "This is pretty", "Gee color", "Oh! or "This is weird."

5. Self-explanatory.

6. Unreflectiveness is scored when the subject accounts for his responses (in inquiry) by placing emphasis upon subjective conviction or past experience rather than on present articulated perceptual experience. Examples found frequently in the inquiry are: E: "What in the blot suggested....." S: "It just looks like it, or Because we had one just like that at home, or Because I like....."

7. Phobic Verbalizations is scored when the subject uses descriptive adjectives in such a way as to convey a sense of fear or painful emotional involvement with the percept. Examples: (Weird, horrible, scary, nasty, etc.).

8. Notable lack of specificity is scored when the subject's responses lack specificity or determination; for example responses such as "some kind of animal, people standing at a table or something," or extremely bare and unelaborated responses such as "paints" "ink" etc.

9. Infantile Content is scored where much imagery as dolls, children's toys, fairy tale characters, Santa Claus, etc.

occur in the subject's record.

REACTION-FORMATION ITEMS:

1. R greater than 40 in a spirit of duty and obedience is scored where the lengthy record is characterized by a compliant, helpful attitude on the part of the subject. The record may be but need not be characterized by such remarks as, "I could give more responses if you like, or .....Do you want me to go on or.....Do you want me to tell you everything I see."

2. Rejection of upper red detail on Card II as Heads of Humans. This can only be scored where the red D is used as the head of a non-human creature or when the lower black D is seen as a headless body.

3. High FC, Fc, FC', Fk is score on the basis of an empiricial examination of the determinant profile. In this case High is a relative term and refers to how these determinants as a group have relative dominance in the profile.

4. Minimization and prettying up of hostile imagery. This is scored where counter phobic descriptions of potentially hostile percepts are encountered or where hostile percepts after being given are undone. Examples: "a toy lion, harmless" "Two clowns staging a fight" or"Two children leering at at each other, not leering, making love with their eyes."

5. Benign Dutiful Card Criticism is scored when the subjects criticisms are less hostile and more in an attitude of helpfulness or out of a feeling that intellectual criticism in a trait highly esteemed by the examiner.

6. Volunteering inquiry information is scored when it is clear from the inquiry that the subject has caught on to what is required in the inquiry and tries to anticipate the examiner's wishes by giving the proper explanations of his response. This is probably reflected best in the absence of questions by the examiner in the inquiry.

INTELLECTUALIZATION ITEMS:

1. Test viewed as an Intellectual challenge and there are attempts at displaying Virtuosity is scored where the subject's attitude, his vocabulary, and the "intellectual" nature of his Rorschach content discloses an attempt at showing off or of proving his intellectual prowess. This is most often reflected in excessive, stilted, and pedantic verbiage and

minutely detailed descriptions.

2. Cultured Content is scored when the subject introduces percepts that reflect an exaggerated striving for historical, anthropological, and scientific specificity in his Rorschach content. This may be expressed in a relentless naming of bones, geologic periods, mythological creatures, etc.

3. Exceptionally wide range of Interest Content is scored upon analysis of the content summary sheet. This should include wide variation in content outside the most frequent content categories. An impressionistic judgment is required here.

4. Arty-Abstract version of emotional expression is scored where real affect is conveyed under the guise of abstract or metaphoric verbalizations. Examples "symbolic of conflict" "danse macabre" etc.

5. Studious Attitudes is scored when the subject relates himself to the examiner as a student to a teacher and to the examination as an achievement or I.Q. test, and to his responses as passing or failing. His responses will be filled with the characteristics he considers as meriting as A.

6. Systematic rotation of the Cards is scored where a pattern can be detected in the way the subject rotates the cards.

7. Precision elegance and complexity of Verbalization is scored where the subject demonstrates a penchant for using "large" words.

8. Low W with pedantic attitudes is scored where wholes are rarely produced mainly because of the Subject's perfectionistic needs and his criticism of the failure of the blots to lend themselves to an integrated whole response.

ISOLATION ITEMS:

1. Self-explanatory.

2. Self-explanatory.

3. Machine or mechanical content is scored in the presence of: wheels, tweezers, pliers, dance teams, bookkeepers, but not the common means of conveyance eg. cars, boats, etc.

4. Large number of object content is scored where there are 7 or more objects in the record.

5. Emphasis on Symmetry and exactness is scored where the subject's verbalizations disclose a concern with balance, harmony, and symmetry of the blots.

6. Emphasis of subjective feelings of coldness is scored where Rorschach imagery is related to cold weather or cold objects, directly or indirectly as for example: snowflakes, coats, ice, ice cream, snowman, etc.

7. Noteworthy awareness of own thought processes is scored when the subjects protocol reveals a tendency to introspective reports of what he is experiencing during the test, the processes going on in his mind, that lead to a particular response.

8. Emotionally loaded percepts delivered without affect is scored for percepts such as: penis, breast, bowel movement, testicles, gore, menstruation, etc. with no indication of anxiety or embarassment or without subsequent improvement.

9. Attitudes of detachment and objectivity is scored where the subjects responses indicate an unwillingness to stray from the obvious or popular responses or criticism of using the imagination too freely; also there is an absence of spontaneous affective comment.

PROJECTION ITEMS:

1. Self-explanatory.

2. Low CF is defined as less than 2 in a record of average length.

3. Self-explanatory.

4. Self-explanatory.

5. Profile concentrated in the areas of M, m, FM and F is scored when these determinants dominate the record almost to the total exclusion of other determinants.

6. Self-explanatory.

7. Images denoting surveillance and detection is scored for responses e.g. eyes per se when given as a disconnected percept; eyes as detail when found in the inquiry more than once, finger prints, police, people observing others, people looking at or staring at each other, etc.

8. Images of projected hostility. This is scored when percepts

indicate creatures doing harm or intending to do harm to other creatures.

9. Interest in what the test is "really" about is scored when the subject asks if he is right or wrong. What the examiner sees in the blots or other direct or indirect questions guaged to determine the hidden meaning of the test.

10. Self-explanatory.

11. Self-explanatory. (remarks)

MIXED ITEMS:

1. Self-explanatory.

2. Evasive-defensive inquiry is scored where the inquiry is obviously guarded, noncommital, characterized by hedging, etc.

3. Content with hostile threat is scored on the occurance of such content as weapons, claws, the horns of animals, etc.

4. Themes of Omnipotence and Status is scored for percepts such as, coat of arms, emblems, idols, gods, prophets, Jesus, crowns, scepters, kings and queens, Satan, persons of fame, religious personalities, etc.

APPROVAL SHEET

The dissertation submitted by LaMaurice H. Gardner has been read and approved by five members of the Department of Psychology.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the dissertation is now given final approval with reference to content, form, and mechanical accuracy.

The dissertation is therefore accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

January 15, 1964
Date

Frank J. Kobler
Signature of Adviser